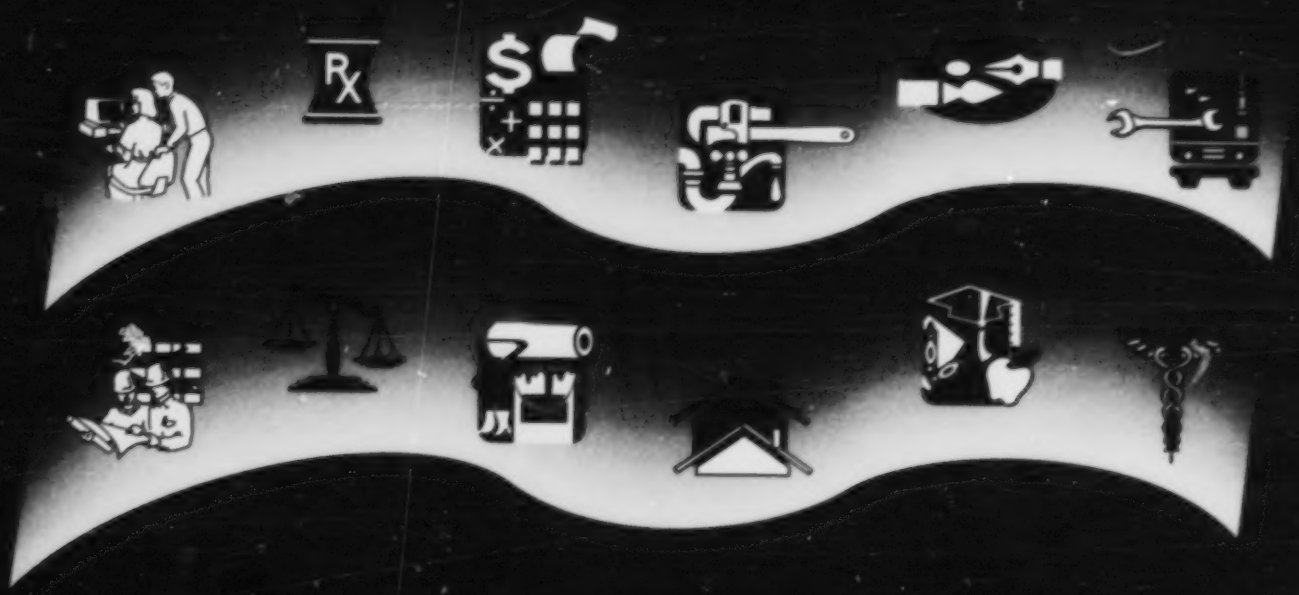

An Occupational Handbook for Nova Scotia

1990 Edition

CAREER OPTIONS

AN OCCUPATIONAL HANDBOOK FOR NOVA SCOTIA

1990 Edition

Nova Scotia Department of
Advanced Education and Job Training
Planning and Evaluation Division

HONOURABLE JOEL R. MATHESON
MINISTER

J.H. CLARKE
DEPUTY MINISTER

February 1990

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Nova Scotia

Department of Advanced Education and Job Training

Office of the Minister

5th Floor, Founders Square
1701 Hollis Street
Halifax, Nova Scotia
B3J 3M8

Our file no:

Dear Reader:

Many Nova Scotians of all ages will at some time face the important decision of choosing or changing careers. This process deserves careful reflection and consideration of the many available options. To assist in this important task, I am pleased to release **Career Options 1990, An Occupational Handbook for Nova Scotia.**

This is the second edition of **Career Options** which has been compiled by the Nova Scotia Department of Advanced Education and Job Training. **Career Options 1990** provides basic labour market information on the major occupational groups in Nova Scotia together with brief job descriptions and training information related to those occupational groups.

It is my hope that this handbook will acquaint readers with the broad range of occupations that exist in Nova Scotia and assist them as they consider the type of job that best suits their needs, abilities and ambitions.

With best wishes for success
as you consider your career,

Joel R. Matheson

Joel R. Matheson, Q. C.
Minister of Advanced Education
and Job Training

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Preface

The purpose of **Career Options, An Occupational Handbook for Nova Scotia,** is to provide students and other individuals with a brief description of the major occupational groups in the Province of Nova Scotia together with basic labour market information associated with the occupations.

The occupational forecasts presented in **Career Options** are based on a revised version of the 1989 Provincial Scenario of the Canadian Occupational Projection System (COPS). COPS is a computerized occupational forecasting system developed and maintained by Employment and Immigration Canada (EIC). The Provincial Scenario was developed jointly by the Nova Scotia Regional Office of Employment and Immigration Canada (Economic Services), the Nova Scotia Department of Industry, Trade and Technology, the Nova Scotia Department of Finance and the Nova Scotia Department of Advanced Education and Job Training.

The employment forecasts presented in **Career Options** are **estimates** of future occupational requirements which have been compiled on the basis of current knowledge. While it is not possible to predict the future with total certainty, at the time of printing the estimates were as accurate as possible. Readers may notice that the occupations included in several occupational groups in the 1990 edition of **Career Options** have been revised in comparison to those defined in **Career Options, 1988.** As well, a few different occupational groups have been included in the 1990 edition. Therefore, it is not appropriate to compare information in **Career Options, 1990** to the previous edition.

It should also be noted that the occupational information in **Career Options** presents a composite description of related jobs and cannot be expected to reflect specific work situations in particular establishments or communities.

Descriptions of the principal duties associated with an occupation were derived from various sources, including the *Canadian Classification and Dictionary of Occupations* (CCDO) and Statistics Canada's *Standard Occupational Classification.* A bibliography of sources used in the preparation of **Career Options** is included in this handbook.

Comments and suggestions about **Career Options** are invited. You are welcome to complete the questionnaire included in the handbook, or you may send a response to: Maryann Ricketts, Senior Economist, Nova Scotia Department of Advanced Education and Job Training, Planning and Evaluation Division, P.O. Box 2086, Station 'M', Halifax, Nova Scotia, B3J 3B7.

Acknowledgements

Career Options, An Occupational Handbook for Nova Scotia was developed and produced by the Planning and Evaluation Division of the Nova Scotia Department of Advanced Education and Job Training under the general guidance and direction of Wayne Doggett, Director. Day-to-day work was carried out by Shannon Polley, Research Officer and Bruce Roberts, Economist through the planning and direction of Maryann Ricketts, Senior Economist.

Numerous individuals and organizations contributed to the preparation of **Career Options** and their help has been greatly appreciated.

A special note of thanks is extended to the many employers, business associations, professional associations and career counsellors who provided useful comments on earlier drafts of the document. Some of these groups have also allowed their name and address be included as a source of further information for particular occupations. It should be noted that the inclusion of an organization's name does not necessarily imply their endorsement of the information contained in the handbook, nor does it imply the Department's endorsement of the organization.

The Planning and Evaluation Division greatly appreciates the assistance provided by the Program Development Division of the Department of Advanced Education and Job Training in preparing many of the original occupational descriptions used in the 1990 edition of **Career Options**. The Youth Initiatives Division of the Department also assisted in providing useful information and comments regarding several of the initial drafts of descriptions which were compiled.

Thanks is also extended to the staff of Economic Services, Employment and Immigration Canada, Nova Scotia Regional Office for providing comments pertaining to labour market data included in **Career Options**. As well, several other Provincial and Federal government departments provided comments on drafts of occupational descriptions and their assistance is gratefully acknowledged.

CAREER OPTIONS USERS' QUESTIONNAIRE

As a user of **Career Options,** your opinion about the types of labour market information presented is valuable for making changes and improvements in future documents. It should be noted that while every effort is made to ensure the accuracy and timeliness of the information contained in **Career Options, 1990,** errors or omissions may occur. Your comments and suggestions about this publication, whether general or specific, would be greatly appreciated. Please help in planning for new editions of **Career Options** by completing the following questionnaire and/or providing comments. Your response may be mailed to the Nova Scotia Department of Advanced Education and Job Training at the address indicated at the end of the survey. Thank you for your assistance.

1. Was the user's guide useful and easy to understand?

   ❑ yes ❑ no

2a. Were the written descriptions of the occupational profiles easy to understand?

   ❑ yes ❑ no

2b. Is there any additional information which would have been useful to include in the written description of the occupational profiles? If yes, please elaborate.

3a. Was the labour market information in the occupational profiles useful?

   ❑ yes ❑ no

3b. Is there any additional labour market information that you think would have been useful to include in **Career Options, 1990**? If yes, please elaborate.

4. Were there any occupations which you could not find in the index of **Career Options, 1990**? If yes, please specify.

5a. Was the format/structure clear and easy to understand?

   ❑ yes ❑ no

   If no, please elaborate.

5b. What improvements/changes could be made with regard to the format/structure in its present form?

6. In your opinion, was it useful for you to have the information contained in **Career Options, 1990**?

❑ yes ❑ no

7. Is there additional information/changes that could be added to the handbook that would make it a more useful tool for the task of choosing or changing a career?

General Comments

Below please identify yourself:

I am a	grade 9	grade 10	grade 11	grade 12	post-secondary
student	❑	❑	❑	❑	❑
teacher	❑	❑	❑	❑	❑
counsellor	❑	❑	❑	❑	❑

other (please specify) _____

Please send your completed questionnaire to:

Nova Scotia Department of Advanced Education and Job Training
Attn. Maryann Ricketts
P.O. Box 2086, Station M
Halifax, N.S.
B3J 3B7

or contact Ms. Ricketts at (902)424-5294

A Note to Students

The purpose of **Career Options** is to provide basic labour market information on the major occupational groups in Nova Scotia. This information is intended to assist you in the difficult and somewhat perplexing task of choosing or changing a career. For many people, choosing a career is very much a hit and miss affair. Some individuals take the first opportunity that presents itself without considering or being aware of the alternatives. However, a well thought plan would be most beneficial in making career decisions.

One of the main elements in making a career choice is an awareness of the available options. This handbook will introduce you to the broad variety of occupations that exist in the Nova Scotia economy, in order that you may begin to think about the type of occupation that best suits your own unique combination of skills, abilities, interests and personal aspirations.

Career Options is essentially a reference handbook of career opportunities in Nova Scotia. It is not an in-depth review of each occupation in the Province. In using **Career Options** it is suggested that you browse through the index, locate a number of occupations in which you are interested (and hopefully discover a few you had not previously considered), and obtain the basic information associated with these occupations from the handbook. More in-depth information about these occupations should be sought from other sources such as career counsellors, individuals currently working in the occupation, firms or associations related to the occupation, and other career counselling documents.

For each of the 153 occupational groups covered in **Career Options** a variety of descriptive and statistical information has been presented which relates specifically to the Province of Nova Scotia. The descriptive information includes a summary of the nature of the work performed by individuals in the occupation, the minimum qualifications and/or experience required, a list of the schools, universities and/or colleges that provide related training, and an indication of the most common skills and/or aptitudes associated with the occupation. The statistical information includes estimates of employment and unemployment levels for each occupation, projected employment growth from 1989 to 1995, and estimated earning levels in 1989.

A user's guide to the information contained in **Career Options** is presented in the section entitled "How to Use Career Options". You are strongly advised to read this section before proceeding to the information profiles on specific occupations.

The forecasts of labour market conditions in Nova Scotia which are presented in this document are estimates based on information available at the time of printing. The estimates are as accurate as possible but it should be noted that nobody can predict the future with certainty. These forecasts should, therefore, be considered as an *estimate* of future requirements based on current knowledge. **Career Options, 1990** also contains several revisions to the definition of occupational groups compared to the 1988 edition. It is not appropriate to compare information in **Career Options, 1990** to the 1988 edition.

It is hoped that this handbook will help you in your search for a career that is both interesting and rewarding, and you are wished every success in this important endeavour.

Comments and suggestions about **Career Options** are invited. You are welcome to complete the questionnaire located on page xi in **Career Options**.

A Note to Counsellors

Career Options is an occupational handbook containing information specifically related to occupations in the Nova Scotia labour market. The handbook has two major objectives; (1) to introduce students and other individuals to the broad range of career options that exist in Nova Scotia, and (2) to provide basic labour market information on the major occupational groups in the Province.

Career Options is essentially a reference handbook of career opportunities in Nova Scotia. It is not an in-depth review of each occupation in the Province. Ideally, the handbook will be used directly by students and other individuals in reviewing career prospects. To this end, the information in the handbook has been kept as short and simple as possible. It is recommended that students browse through **Career Options** and its index, locate a number of occupations in which they are interested (and hopefully discover a few they had not previously considered), and review the basic information in the handbook. More in-depth information about these occupations should be sought by students from other sources such as career counsellors, individuals currently working in the occupation, firms or associations related to the occupation, and other career counselling documents.

In order to cover as broad a range of occupations as possible in **Career Options,** over 400 specific occupations as defined by the *Canadian Classification and Dictionary of Occupations* (CCDO) at the four-digit level were clustered into about 150 major occupational groups. This clustering of occupations involved the combination of specific four-digit CCDO occupations into occupational groups on the basis of skill, education, and training requirements.

Each of the approximately 150 occupational groups contains at least one and as many as fifty specific four-digit CCDO occupations. Typically, the more highly skilled occupational groups contain fewer specific four-digit CCDO occupations while the lower skilled occupations may contain many specific four-digit occupations. On average, there are approximately three four-digit CCDO occupations per occupational group.

A complete listing of all the occupational groups along with their associated four-digit CCDO occupations is presented in **Appendix A.** In addition, **Appendix B** contains a complete listing of the four-digit CCDO occupations contained in **Career Options**, along with the page number on which their associated occupational group is located. The index at the back of the book provides a full listing in alphabetical order of all occupations covered in **Career Options.**

A users guide, **"How to Use Career Options"**, is included in the beginning of **Career Options.** This guide is intended primarily for use by students. For the assistance of counsellors and other interested individuals, a more thorough explanation of the data contained in the handbook is provided in **Appendix C, Data Sources and Notes.**

This is the second edition of **Career Options.** At the time of printing every effort was made to ensure that accurate and timely information has been included in the document. In several cases the CCDO occupations associated with the given occupational groups have been revised in the 1990 edition of **Career Options.** A few different occupational groups have also been added to **Career Options, 1990.** Because of these changes, it is not appropriate to try and compare information in **Career Options, 1990** to the 1988 edition.

The goal in producing **Career Options, 1990** was to present the most accurate and up-to-date information which was available; however, unintentional errors and omissions may be present. The assistance of readers is requested in improving and planning for future editions of **Career Options.** A questionnaire is located on page xi in this handbook for your use should you wish to convey your comments and suggestions.

A Note on Career Paths

Career Options 1990 offers career information on the many occupational choices available in Nova Scotia. It elaborates on the nature of occupations and the relevant labour market conditions, thus facilitating an informed career decision based on accurate and timely information.

Career Options 1990 also discusses the training, education and certification requirements for specific occupations. After successfully fulfilling the necessary requirements, an individual will usually be employed in an entry level position.

However, as the individual gains experience and competency in the job, advancement opportunities may present themselves. These opportunities often involve more responsibility and require increased skill in particular areas of the job. Certain jobs in the same line of work but with differing levels of skill and responsibility form job ladders. These job ladders define natural lines of promotion and map out possible career paths for the individual.

Individuals should also recognize that skill differences between job ladders are not necessarily so large that they cause hiring officials to disqualify those outside the job ladder from consideration. It is possible for employees to move to a different job ladder. Opportunities for advancement may occur outside an individual's current job ladder with increased education and training. Learning is a lifelong process, and whether facilitated by formal education or on-the-job training, transferability between job ladders will be enhanced. For many individuals changing job ladders is an important decision requiring careful thought and consideration. The strength of a person's attachment to a specific occupation usually is dependent on his or her investment in it in terms of education and training. The greater the investment, the more likely a person will remain in the occupation, because starting another career could result in loss of earnings and related benefits for an extended length of time.

Promotional opportunities on the job ladder may also be enhanced by the individual. Flexibility and perseverance greatly affect the number of available opportunities for advancement. Often a change in jobs may require a willingness to accept change in geographic location, the number of hours worked, and the level of job stress due to the increased level of responsibility.

The size of the employing organization may also affect the definition of job ladders. A small to medium-sized organization may not be equipped to offer as many opportunities for advancement as a larger organization with a greater number of employees.

Whether due to an individual's skills, the nature of the employing organization, or the job itself, not all job ladders offer the same opportunities for advancement. Job ladders often differ in their extent and shape; some job ladders end at relatively low grades, while others reach the top of an organization. To present some examples, several occupations from **Career Options 1990** have been chosen and their job ladders outlined. Of course, it must be remembered that these are only examples; an individual's own career ladder can be as varied as the many occupations presented in this handbook.

Science Technicians and Technologists:

Science technicians and technologists often begin as trainees in laboratory positions under the general direction of a scientist or experienced technician or technologist. As they gain experience, they take on more responsibility and may handle assignments under only general supervision. Some **science technicians and technologists** may advance to supervisory positions in certain areas of laboratory work and, after several years' experience, to positions such as chief technician or technologist or laboratory manager in a large organization or institution. Manufacturers in many industries value the knowledge and experience that **science technicians and technologists** bring to the firm, and the shift out of the laboratory to product sales and development offers excellent opportunities for career advancement. These occupations may be found under the occupational group **Life Sciences, Technicians and Technologists**, and under the occupational group **Physical Sciences, Technicians and Technologists**.

Metalworking Machine Operators:

Although no special education is required to become a **metalworking machine operator,** persons can improve their opportunities for advancement by completing high school courses in shop, mathematics, and blueprint reading. Advancement opportunities in this occupation are limited. Some workers may advance to supervisory positions or transfer to trainee jobs for more skilled occupations such as setup operator, machinist, or moldmaker. This occupation may be found under the **Elemental, Machine-Related, Indoor** group.

Chefs and Cooks:

Advancement opportunities for **chefs and cooks** are better than most other food and beverage preparation and service occupations. Many acquire higher paying positions and new cooking skills by moving from one job to another. Others may gradually advance to executive chef positions, or supervisory or management positions, particularly in hotels, clubs, or larger restaurants. Some eventually go into business as caterers or restaurant owners; others may become instructors in high schools, community colleges, and other academic institutions.

Accountants and Auditors:

Many advancement opportunities are open for capable **accountants and auditors**; however, those having inadequate academic preparation may be assigned less challenging jobs and find promotion difficult. Those **accountants and auditors** who deal successfully with top management often become supervisors, managers, or partners; or they may transfer to executive positions in private firms. Some open their own public accounting offices. Beginning accountants often start as ledger accountants, junior internal auditors, or as trainees for technical accounting positions. They may advance to chief plant accountant, chief cost accountant, budget director, or manager of internal auditing. Some become controllers, treasurers, financial vice-presidents, or corporation presidents. These occupations may be found under the group **Officers and Managers, Financial**.

Engineers:

Beginning **engineering graduates** usually do routine work under the close supervision of experienced engineers and, in larger companies, may also receive formal classroom or seminar-type training. As they gain knowledge and experience, they may be assigned more difficult tasks with greater independence to develop designs, solve problems, and make decisions. **Engineers** may become technical specialists or supervisors of a staff or team of engineers and technicians. Some eventually become managers or administrators within engineering; others leave engineering for managerial, management support, or sales positions. Some **engineers** obtain graduate degrees in business administration to improve advancement opportunities. Many high level executives in government and industry began their careers as engineers.

Registered Nurses:

From staff positions in hospitals, **registered nurses** may be promoted to jobs with more responsibility, many of which can be obtained through experience, competency and good performance. **Registered nurses** who choose a career in management can advance to a position as assistant head nurse or head nurse. Often the availability of these positions is dependent on the size of the institution. From there, advancement to assistant director, director, and vice president positions is possible. Increasingly, positions at the management level require a graduate degree in nursing or health services administration.

For **registered nurses** who prefer close contact with patients, career advancement may mean becoming an instructor in a school of nursing, a clinical nurse specialist in a particular area, or becoming involved in quality assurance.

A growing number of **registered nurses** are moving into the business side of health care. Their nursing expertise and preparation for work as members of a health care team equip them for management positions in fields such as emergency, acute and chronic care services. Some are employed by large health care corporations in areas like health planning and development, marketing and quality assurance. Others run their own businesses, such as home health care agencies. This occupation may be found in the group **Registered Nursing Occupations**.

The foregoing presents just a few examples of possible job ladders or career paths which may be available to those who enter given occupations. It is hoped that these examples will help readers consider the many potential job ladders as they review occupational information in **Career Options 1990**.

How To Use Career Options

LOCATING AN OCCUPATION IN CAREER OPTIONS

In order to locate information on a particular occupation within **Career Options** you may refer to the alphabetical listing of occupations contained in the index located at the back of the handbook. For example, if you want to find information on Electronic Technicians and Technologists simply look up this title in the index and go to the page indicated (page 92 for Electronic Technicians and Technologists).

As the emphasis in **Career Options** has been to cover as broad a range of occupations as possible, occupations with similar skills and educational requirements have been combined. A complete list of the occupations contained in each occupational group is provided in **Appendix A.**

Readers will see the abbreviation "N.E.C." used throughout **Career Options**. Please note that "N.E.C." denotes "Not Elsewhere Classified" in reference to specific occupations and occupational groups.

Readers may notice that several of the occupational groups in **Career Options, 1990** have been revised compared to the 1988 edition. In several cases the number of occupations defined in the occupational groups as listed in **Appendix A** have been changed. In addition, a few new occupational groups have been added. Users are advised that it is not appropriate to compare the information contained in **Career Options, 1990** to the 1988 edition.

EXPLANATION OF INFORMATION CONTAINED IN CAREER OPTIONS

For the purpose of this explanation, the information profile on the occupational group Electronic Technicians and Technologists will be used as an example. For convenience, the information profile for this occupation appears on the following page (page xvii). Information on all other occupational groups follow a similar format to this example.

Occupation Title:

The title of the occupational group appears on the top of each page in **Career Options** (Electronic Technicians and Technologists in the chosen example). The title can be used in conjunction with **Appendix A** to determine the specific occupations contained in the occupational group.

Most Significant Occupations in this Group:

This lists the most significant occupations included in the particular occupational group. Each of the approximately 150 occupational groups contained in **Career Options** comprises at least one and as many as fifty specific occupations. This section lists up to five of the largest occupations in each group in decreasing order of 1989 employment levels. Where there is only one occupation in an occupational group, this section is omitted. Each specific occupation title is preceded by a four-digit number called the "CCDO #", which is the code number assigned to the occupation by the *Canadian Classification and Dictionary of Occupations* (CCDO). This number can be used to reference other sources of information on a specific occupation.

Nature of the Work:

A description of the general duties performed by individuals in the occupation is provided together with working conditions, physical requirements and the work environment where appropriate. For the occupational group Electronic Technicians and Technologists, general duties may include operating, installing and repairing a wide range of electronic equipment.

Requirements:

The education and/or level of training required in order to obtain employment in the occupation is indicated. In the case of Electronic Technicians and Technologists, a certificate or diploma in electronics from a recognized training institute is generally required.

Training Paths:

This section outlines the normal methods for obtaining the skills required to work in the given occupations. This may involve formal education and training, on-the-job-training, or several years work experience. The institutions that provide related education and/or training are outlined and the minimum requirements for admission into the relevant training programs are also listed. Training programs for Electronic Technicians and Technologists, for example, are provided by several institutions in Nova Scotia including the Institute of Technology and the Adult Vocational Training Centres of the Nova Scotia Community College as well as the University College of Cape Breton among others.

ELECTRONIC TECHNICIANS AND TECHNOLOGISTS

Most Significant Occupations in this Group

CCDO#	Title
8735	Wire Communications and Related Equipment Installing and Repairing Occupations
8535	Electronic and Related Equipment Installing and Repairing Occupations, N.E.C.
8537	Radio and Television Repairers
9551	Radio and Television Broadcasting Equipment Operators

Nature of the Work

This group involves occupations related to the electronics industry concerned with carrying out various technical and technological functions. Activities may include operating, installing and repairing radio and television transmitters; business and commercial machines; scientific, engineering, optical and medical instruments and apparatus; and photographical, meteorological and similar equipment. Most technicians and technologists work regular hours in offices, laboratories, electronics shops, or industrial plants. Some electronics positions may involve exposure to electrical shock hazards from equipment.

Requirements

Individuals in these occupations are generally required to possess a certificate or diploma in Electronics from a recognized institute. While certification is not mandatory, employers are increasingly demanding it as part of their employment requirements.

Training Paths

Courses in Electronics Technology are available through a two-year program at the Institute of Technology, in Halifax, of the Nova Scotia Community College and a three-year program at the University College of Cape Breton in Sydney. A second option is a twelve-month program offered at the Adult Vocational Training Campuses of the Nova Scotia Community College in Cape Breton and Dartmouth. In addition, two-year Electronics programs are also offered at several of the Community College campuses. As a final option, a two-year Marine Electronics program is offered at Burridge Campus. Completion of the eleventh or twelfth grade or its equivalent with a strong standing in mathematics and physics is generally specified as a prerequisite for acceptance into these programs.

Skills/Aptitudes

Individuals are required to have the ability to understand principles of electronics and mechanical operations. They are required to perform intricate work with their hands and must have good motor skills and manual dexterity. Individuals must be able to collaborate and co-operate with others as they will often be involved in teamwork.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,690**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **160**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$33,000**

FOR FURTHER INFORMATION CONTACT:

Society of Certified Engineering Technologists and Technicians in Nova Scotia
P.O. Box 601
Halifax, Nova Scotia
B3J 2R7

P01

Skills/Aptitudes:

A description of the skills and aptitudes normally associated with the particular occupation is provided. Electronic Technicians and Technologists are generally required to have good diagnostic skills and manual dexterity.

Nova Scotia Labour Market Conditions:

Several key labour market statistics on employment and unemployment levels for the particular occupational group are listed under this heading. Employment numbers are rounded to the nearest 10 and earnings are rounded to the nearest 1,000. Where "N/A" appears in this section it means that data was not available.

Number of people employed:

The estimated number of people employed in the occupational group in 1989 is presented. In the case of Electronic Technicians and Technologists, employment was estimated at 2,690 for 1989.

Employment growth between 1989 and 1995 is projected to be:

This line indicates the relative employment growth rate from 1989 to 1995 for the particular occupational group in comparison to all occupations within the Nova Scotia economy. The employment growth level may be termed average, above average, or below average. Employment growth for Electronic Technicians and Technologists is projected to be average from 1989 to 1995.

Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at:

This line indicates the projected average number of new job openings per year from 1989 to 1995 in the particular occupational group. New job openings are projected to occur due to new employment growth (new firms opening and existing firms expanding) and due to occupational attrition (occupational attrition results from existing workers either retiring, moving to another province or country, or moving to another occupation). This latter factor of occupational attrition is responsible for the majority of new job openings in Nova Scotia and in all other developed economies. The average number of new job openings over this period for Electronic Technicians and Technologists is estimated at 160 per year. It should be noted that competition for these job openings may come from a variety of sources including: new graduates from education and or training programs, qualified individuals in the occupation who are currently unemployed, qualified individuals moving to Nova Sco.ia from other provinces or countries, and qualified individuals changing occupations.

The unemployment rate during the third quarter of 1989:

This line indicates the relative unemployment rate for the particular occupational group during the third quarter (September) of 1989. Occupational unemployment rates are reported in comparison to the average unemployment rate for all occupational groups in Nova Scotia. The unemployment rate is calculated on the basis of Unemployment Insurance beneficiary data and is termed either average, above average, significantly above average, below average, or significantly below average in comparison to the average unemployment rate. The unemployment rate for Electronic Technicians and Technologists as of the third quarter 1989 was significantly below average.

Estimated annual average earnings in 1989:

The estimated average annual earnings of full-time, full-year workers in the occupational group as of 1989 is presented. It should be noted that this figure is the average for all people in the occupation. Starting wages are generally significantly below this figure. Earnings in 1989 are calculated on the basis of 1985 earnings adjusted for estimated income increases over the period. It is estimated that Electronic Technicians and Technologists who worked full-time for the full year earned an average of $33,000 in 1989.

For Further Information Contact:

Whenever possible, the address of an organization related to the occupation is provided as a source of further information. Individuals interested in becoming Electronic Technicians or Technologists, for example, could contact the Society of Certified Engineering Technologists and Technicians in Nova Scotia.

Occupational Descriptions and Labour Market Statistics

Service Occupations, Personal

CHILD CARE OCCUPATIONS

Nature of the Work

This occupational group is concerned with caring for children in private homes, private or government institutions, or recreational establishments during the absence of parents or guardians, as well as with assisting parents to care for children. Those caring for infants and toddlers follow a routine of basic care, such as feeding, bathing, diapering, comforting, and playing with children. Those working with older pre-school children take care of their basic needs and also plan and carry out programs which stimulate their physical, emotional, intellectual and social growth. Child care centres are open year round and often for twelve hours a day. Full time personnel usually have eight-hour shifts with part time personnel supplementing. Child care workers spend much of their time standing, walking, bending, stooping and lifting.

Requirements

Although there are no formal educational requirements to work in these occupations, employers are increasingly requesting proper training and/or experience. In order for a child care facility to be licensed, the director and at least two-thirds of the staff members must have the necessary certification and/or experience as regulated by the Nova Scotia Department of Community Services.

Training Paths

There are five programs offered in Nova Scotia which grant certification. The St. Joseph's Day Care Centre in Halifax offers a ten-month course in Early Childhood Education. Kingstec, the Froebel Institute in Truro, and the Cumberland Campus of the Nova Scotia Community College offer a one-year certificate program in Early Childhood Studies. The Nova Scotia Teacher's College offers a two-year on-campus diploma program and an extension program at nineteen different locations throughout the Province in Child Development Services. A four-year Bachelor of Child Study program is also available at Mount Saint Vincent University. All of the above require successful completion of the twelfth grade or its equivalent for entrance. Courses are also available at the Atlantic School for Nannies in Bedford. This institution should be contacted for further course information.

Skills/Aptitudes

These individuals should enjoy working with children. They should be patient, imaginative and resourceful. As well, they must be able to communicate ideas in a clear and concise, yet pleasant, manner.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **4,830**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **560**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$13,000***

* Estimated average income level only for workers employed in registered day care facilities.

FOR FURTHER INFORMATION CONTACT:

Director of Day Care Services
Nova Scotia Department of Community Services
P.O. Box 696
Halifax, Nova Scotia
B3J 2T7

GUIDES, HOSTS/HOSTESSES AND STEWARDS

Most Significant Occupations in this Group

CCDO#	Title
6144	Guides
6145	Travel and Related Attendants, Except Food and Beverage

Nature of the Work

This group includes a variety of occupations concerned with providing assistance to travellers and tourists. Duties may include escorting individuals or groups on travel tours and excursions, arranging recreational activities, and attending to the comfort of passengers on airplanes, ships or trains. These individuals may be required to work on holidays, evenings and weekends.

Requirements

While there are no formal training requirements to work in these occupations, employers are increasingly looking for individuals with related training. Airline flight attendants are generally required to be bilingual and to have completed the twelfth grade.

Training Paths

Training in these occupations is generally provided on-the-job by the employer.

Skills/Aptitudes

Individuals in these occupations should be poised, tactful, patient and resourceful and be able to deal comfortably with strangers. The ability to speak in more than one language would be a definite asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **590**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **80**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$28,000**

HAIRDRESSERS AND RELATED OCCUPATIONS

Nature of the Work

This occupational group is concerned with such activities as cutting, shampooing, colouring, perming, and styling hair; cleaning, shaping and polishing finger and toe nails; skincare and applying cosmetics; and providing other beauty treatments to change the appearance of individuals.

Hairdressers usually work in clean, pleasant surroundings with good lighting and comfortable temperatures. Their work can be arduous and physically demanding as they must be on their feet for long periods of time. Hairdressers are often required to work evenings and weekends, when salons are busiest.

Requirements

While most hairdressers have either a General or Master's License, the minimum requirement is a Junior Certificate, which is issued after passing an examination given by the Association of Nova Scotia Hairdressers. Estheticians and manicurists require a special license. There are no such requirements for barbers.

Training Paths

Training in these areas is provided at several campuses of the Nova Scotia Community College and private trade schools throughout the Province. The length of these hairdressing courses varies from nine months to two years with the minimum entrance requirement typically being the tenth grade or its equivalent. Following 1,250 hours of training, hairdressers are required to pass a theoretical and practical examination administered by the Association of Nova Scotia Hairdressers Board of Examiners to qualify for a Junior Certificate. An additional 960 hours of practical work experience qualifies the individual for a General License. A Master's License is available for those holding a General License for at least two years. Special licenses for facials and manicures may be obtained following training and examinations.

Skills/Aptitudes

Individuals in these occupations should possess good finger dexterity, interpersonal skills, be able to follow directions closely, and be imaginative and creative. Business skills are important for those who plan to operate their own salons.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **4,170**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **410**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$14,000**

FOR FURTHER INFORMATION CONTACT:

Association of Nova Scotia Hairdressers
Unit 9, 75 MacDonald Avenue
Dartmouth, Nova Scotia
B3B 1S5

HOTEL CLERKS

Nature of the Work
This occupational group is concerned with accommodating hotel customers by performing any combination of the following duties: registering guests; issuing room keys and instructions to porters; receiving, delivering or forwarding packages, baggage, freight, and other items for hotel guests; responding to enquiries regarding hotel services and registration of guests; handling guests' complaints; making and confirming reservations; giving statements to departing guests; and collecting payments. These individuals are often required to work weekends, evenings and holidays.

Requirements
There are no formal requirements for entry into this occupation.

Training Paths
Training for this occupation usually takes place through on-the-job training provided by the employer under the supervision of a qualified hotel clerk. Completion of the twelfth grade or its equivalent is helpful.

Skills/Aptitudes
Individuals should possess good interpersonal and communication skills. A neat appearance and a friendly, helpful manner are important. A good memory for names and faces is a definite asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **390**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **60**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential
- Estimated average annual earnings in 1989: **$14,000**

OTHER SERVICE OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
6142	Housekeepers, Servants and Related Occupations
6149	Other Personal Service Occupations
6199	Other Service Occupations, N.E.C.

Nature of the Work

This group includes occupations concerned with providing such services as underwater diving; fumigating buildings for pest control; cleaning laboratory equipment; performing housekeeping duties in private homes; therapeutic massaging and acting as a companion to elderly, handicapped, or convalescent persons.

Requirements

There are no formal requirements for entrance into any of these occupations except for divers who require a Certificate in Underwater Skills.

Training Paths

Training for all occupations in this group, except divers, is received on-the-job under the supervision of a more experienced employee. Divers must first obtain their certificate as a sports scuba diver which takes six weeks at the Nautilus School of Diving in Halifax. Further training must be obtained at either Seneca College or the Canadian Underwater Training Council, both of which are located in Toronto. These are one year courses requiring completion of the twelfth grade for entrance. Successful completion of these courses allows the individual to be employed as a commercial diver.

The Canadian College of Natural Healing in Ottawa offers a diploma program leading to the designation Natural Health Counsellor. Course work in the areas of stress management techniques, the study and application of the therapeutic properties of herbs, acupuncture, homeopathy, and therapeutic massage. Applicants must be over eighteen years of age. Course work may be undertaken at the College in Ottawa or through correspondence. Graduates are considered to be primarily educators who encourage their clients to take responsibility for their health. The College should be contacted for further information.

Skills/Aptitudes

Except for divers, individuals in these occupations should enjoy repetitive and routine tasks. Household workers must be honest, discreet, dependable, courteous, and neat. Physical stamina is also important. Due to the diversity of occupations in this group, specific information should be obtained from other sources.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,570**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **350**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$11,000**

FOR FURTHER INFORMATION CONTACT:

Canadian College of Natural Healing
380 Forest Street,
Ottawa, Ontario
K2B 8E6

SALES CLERKS

Most Significant Occupations in this Group

CCDO#	Title
5137	Sales Clerks, Commodities
4133	Tellers and Cashiers
5135	Sales Workers, Commodities, N.E.C

Nature of the Work

This occupational group is concerned with conducting sales in wholesale or retail businesses. Responsibilities include displaying merchandise, marketing equipment and providing technical information about commodities, preparing sales slips, taking stock in designated areas, or selling and demonstrating merchandise in wholesale and retail trade establishments, homes, on the street and door-to-door. Duties may involve training, directing and co-ordinating the activities of other workers. Most sales clerks must be on their feet for long periods of time. Hours of work will depend on the needs of the employer. Many sales clerk positions are filled by part-time employees who are required to work in the evening and on weekends.

Requirements

There are no formal requirements for entry into this occupation.

Training Paths

The usual path into this occupation is through on-the-job training with an employer. However, there is a one-year course available entitled Retail Sales/Merchandising. This course is offered at various campuses of the Nova Scotia Community College throughout the Province. Completion of the tenth grade or its equivalent is required for entry. Individuals interested in supervisory positions should consider this option.

Skills/Aptitudes

Individuals in this occupation should possess good interpersonal and communication skills. They should always be alert to the customer's needs and be as helpful and efficient as possible. A working knowledge of other languages, especially French, is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **29,840**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **3,770**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$20,000**

WAITERS/WAITRESSES AND BARTENDERS

Most Significant Occupations in this Group

CCDO#	Title
6125	Food and Beverage Serving Occupations
6123	Bartenders

Nature of the Work

This occupational group includes a variety of occupations concerned with the following duties: reserving and arranging dining tables; welcoming and seating customers; providing menus; taking orders; mixing drinks; and serving food and beverages in formal and informal settings in such places as hotels, restaurants, clubs, cocktail lounges, and cafeterias. Food and beverage service workers are on their feet most of the workday and often have to carry heavy trays of food, dishes, and glassware. Although some food and beverage service workers work forty hours or more a week, the majority are employed on a part-time basis and are expected to work evenings, weekends and holidays.

Requirements

Typically, there are no formal requirements for individuals in these occupations. There are, however, a number of programs available in the Province which provide training in these areas. In Nova Scotia, a person must be nineteen years of age to work in a licensed establishment.

Training Paths

Often a bartender will begin as a waiter/waitress or bus person and learn bartending at the workplace. However, there are a number of programs available for those who desire more formal training. The Institute of Technology, in Halifax, of the Nova Scotia Community College in co-operation with Canada Employment Centres offers a five-week course in bartending and a seven-week course in waiter/waitress dining services. Completion of the eighth grade or its equivalent is recommended. A one-year course in dining room service is available at the Annapolis and I.W. Akerley Campuses of the Nova Scotia Community College, and Memorial High School. The minimum entrance requirement for this course is completion of the ninth grade. A course in bartending theory is offered through the Department of Continuing Education, Halifax District School Board. Also, T & T Hospitality Services School in Fredericton offers a two-week program in bartending at various Nova Scotia locations.

Skills/Aptitudes

Individuals in these occupations are in constant contact with the public. They must be well-spoken, friendly and pleasant to both their customers and co-workers. Good organizational skills, the ability to remember details and orders, and the ability to move gracefully and quickly are also important. Individuals must be flexible in terms of hours and days worked as much shift work is required.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **8,720**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **1,300**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$13,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Restaurant and Food Services Association
P.O. Box 3128
South Halifax, Nova Scotia
B3J 3G6

G00

Driving and Trucking Occupations

DRIVING, TRUCKING, AND RELATED OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
9175	Truck Drivers
9171	Bus Drivers
9173	Taxi Drivers and Chauffeurs
9179	Motor Transport Operating Occupations, N.E.C.
9170	Supervisors, Motor Transport Operating Occupations

Nature of the Work

This occupational group is concerned with operating buses, trucks, taxis, automobiles and similar vehicles to carry passengers, goods or materials over short or long distances. Truck drivers are responsible for ensuring their vehicle is safe for highway operation and to make sure their truck is properly weighted on any particular axle. Truck driving has become less physically demanding because most trucks now have more comfortable seats, better ventilation and improved cab designs, however drivers on long runs may face boredom and fatigue. Also, driving through heavy traffic while dealing with passengers can be stressful and fatiguing.

Requirements

Individuals in these occupations must possess a valid driver's license or learner's license at the level required for the particular vehicle driven. Truck drivers must be free of alcohol violations on their driving record. Successful completion of a truck driver training course would be beneficial in gaining employment. Drivers of semi-trailers and tractor trailer combinations must have a Class One driver's license. Bus drivers, ambulance drivers and taxi drivers must be nineteen years of age and have one year of driving experience. Bus drivers must have a Class Two license, and ambulance and taxi drivers a Class Four license. A medical test must also be submitted.

Training Paths

Licensing is done by the Nova Scotia Department of Transportation. The Commercial Safety College in Truro and the Commercial Transportation and Training Consulting Services in Sydney offer a number of courses beneficial to individuals in these occupations. These institutions should be contacted for further information regarding the courses offered.

Skills/Aptitudes

Individuals in these occupations should enjoy driving, possibly over extended periods of time and long distances, and be responsible, self-motivated individuals. An awareness of safety is also important. As drivers often deal directly with the company's customers, they must get along well with people.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **12,820**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: 1,410

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$25,000**

FOR FURTHER INFORMATION CONTACT:

Atlantic Provinces Trucking Association
567 Coverdale Road, Suite 7A
Riverview, New Brunswick
E1B 3K7

or

Commercial Transportation and Training
Consulting Services
P.O. Box 53
Pier Postal Station
Sydney, Nova Scotia
B1N 3B1

H00

Marine Transport and Fishing Occupations

DECK CREW

Nature of the Work
This occupational group is concerned with carrying out deck and bridge duties aboard vessels that transport passengers, goods and materials; and vessels that tow ships, barges or log booms. Duties may include supervising and organizing activities of a deck crew, steering the ship as instructed by a deck officer, standing deck watches, and maintaining the ship's structure and deck equipment.

Requirements
Individuals seeking employment in this occupation should possess basic safety and job orientation training.

Training Paths
Training is provided through the Nautical Institute of the Nova Scotia Community College. Entrance into this three-month course requires successful completion of the tenth grade with good eyesight and colour vision.

Skills/Aptitudes
In this occupation individuals should be able to carry out, receive and communicate verbal instructions and work under minimal supervision in confined spaces, sometimes at heights.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **570**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **40**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential
- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Nautical Institute
Nova Scotia Community College
P.O. Box 1225
Port Hawkesbury, Nova Scotia
B0E 2V0

DECK OFFICERS

Nature of the Work
This occupational group is concerned with managing and operating vessels on oceans or coastal and inland waters. Responsibilities include planning, co-ordinating and supervising the activities of the crew; controlling, steering and navigating the vessel; directing and supervising dredging operations; safeguarding passengers, crew and cargo; piloting the vessel in rivers, harbours and other confined or hazardous waters.

Requirements
Individuals seeking employment in this occupation are required to possess certification in ocean navigation. At various levels, training may culminate into Master Mariner certification.

Training Paths
Training is provided through the Nautical Institute of the Nova Scotia Community College. Students may progress through the officer levels from Watchkeeping Mate Ocean Navigation II to Ocean Navigation I to Master Mariner based on certification of the previous level and the accumulation of sea time. Entrance into the six-month ocean navigation course requires one year of sea time while holding a Watchkeeping Mate certificate.

Skills/Aptitudes
Individuals in this occupation should possess strong leadership skills and a valid eyesight test certificate.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **530**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **60**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential
- Estimated average annual earnings in 1989: **$47,000**

FOR FURTHER INFORMATION CONTACT:

Nautical Institute
Nova Scotia Community College
P.O. Box 1225
Port Hawkesbury, Nova Scotia
B0E 2V0

ENGINE CREW, SHIP

Nature of the Work
This occupational group is concerned with watchkeeping aboard ship, lubricating and assisting in the repair of engines and other equipment, and cleaning engine-room machinery.

Requirements
Individuals seeking employment in this occupation are required to possess certification as an engineer cadet.

Training Paths
Training is provided through the Nautical Institute of the Nova Scotia Community College. Entrance into this ten-month course requires completion of the twelfth grade with good standing in mathematics, physics and science along with good sight and colour vision.

Skills/Aptitudes
In this occupation individuals should be mechanically inclined. They should also be able to carry out, receive and communicate verbal instructions and work under minimal supervision in machinery spaces, sometimes at heights, and exposed to noise, heat and vibration.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **180**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential
- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Nautical Institute
Nova Scotia Community College
P.O. Box 1225
Port Hawkesbury, Nova Scotia
B0E 2V0

ENGINE OFFICERS, SHIP

Nature of the Work
This occupational group is concerned with scheduling, organizing and supervising the activities of the engine-room crew aboard ships. Responsibilities include operating and servicing main engines, boilers, steering and deck machinery, motors, pumps, generators, condensers and other mechanical and electrical equipment.

Requirements
Individuals seeking employment in this occupation are required to possess marine engineering certification.

Training Paths
Training is provided through the Nautical Institute of the Nova Scotia Community College. Students may progress through the officer levels from 4th Class to 1st Class based on the accumulation of sea time and classroom experience. The duration of the course depends on the candidate's ability and effort. Entrance to the 4th Class level requires certification as a Marine Engineering Cadet plus 29 months of sea time.

Skills/Aptitudes
Individuals in this occupation should possess strong leadership skills and a valid eyesight test certificate.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **420**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **40**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential
- Estimated average annual earnings in 1989: **$41,000**

FOR FURTHER INFORMATION CONTACT:

Nautical Institute
Nova Scotia Community College
P.O. Box 1225
Port Hawkesbury, Nova Scotia
B0E 2V0

FISHERMEN/WOMEN

Nature of the Work
This occupational group is concerned with catching fish in coastal, inland or deep sea waters using lines or nets. Activities may include operating lobster pounds, repairing nets, sorting, cleaning and stowing the catch in the hold, unloading the catch at the dock, as well as repairing any damages to the vessel.

Requirements
In order to work in this occupation, the individual must be licensed by the Federal Department of Fisheries and Oceans Canada in Halifax.

Training Paths
Individuals entering this occupation receive the majority of their training through on-the-job experience under the supervision of other crew members. In addition training is available at the Fisheries Training Centre, Pictou, in areas such as navigation, engine repair, net repair, emergency duties, bookkeeping and Fishing Master. The only prerequisite for these courses is current involvement in the fishing industry. For the navigation course, a minimum twelve months of sea time is required. The courses range in length from one week to three months. Additionally, courses are held in local communities through Canada Employment Centres which range in length from two to twelve weeks.

Skills/Aptitudes
Individuals in this occupation should enjoy working outdoors. Fishermen/women follow exact instructions and often work long hours on fishing boats, sometimes exposed to extreme weather conditions. Physical strength and good manual dexterity are also required. A knowledge of boat motors and how to make minor electrical repairs would be an asset.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **8,230**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **N/A**

Earnings Potential
- Estimated average annual earnings in 1989: **$28,000**

OCCUPATIONS IN FISHING, HUNTING, AND TRAPPING

Nature of the Work

This occupational group is concerned with fishing, hunting and trapping wild animals for food, pelts for sale, and killing unwanted predators. Activities may include gathering seaweed and breeding and raising fish.

Requirements

There are no formal requirements for entrance into these occupations, however, a university science degree may be helpful for occupations related to the breeding and raising of fish.

Training Paths

Training for most of these occupations is provided on-the-job under the supervision of more experienced employees. However, to work in a fish hatchery, a Bachelor of Science degree with a major in Biology or Marine Biology is strongly recommended. This three-year degree is available at several universities throughout Nova Scotia and requires the completion of the twelfth grade with an emphasis on mathematics and the sciences for entrance.

Hunters', trappers' and guides' licenses may be obtained through the Nova Scotia Department of Lands and Forests. Hunting licenses are also available at many sporting goods stores throughout Nova Scotia. To obtain these licenses, individuals must take a one-day course in either Hunter's Safety, which results in receiving a Firearm Safety Certificate, or Trapper's Education.

A short course is offered for individuals wishing to obtain their guide's license. The length varies depending on the type of license required (ie. a guide for fishing, hunting, a combination of both, or recreational activities such as canoeing).

Individuals must be sixteen years of age to obtain a trapping license, and a hunting license for small game. To obtain a hunting license for big game, an individual must be eighteen years of age.

Skills/ Aptitudes

Individuals in these occupations should enjoy working outdoors and being physically active. Some jobs require irregular or long working hours and may be very seasonal in nature. A mechanical aptitude may be necessary for making equipment repairs.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **290**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$19,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Department of
Lands and Forests
P.O. Box 698
Halifax, Nova Scotia
B3J 2T9

OFFICERS, FISHING VESSEL

Nature of the Work

This occupational group consists of individuals who are commanding the crew of a fishing vessel, supervising the deck activities of crew members, and organizing and directing the activities of workers engaged in harvesting fish and other marine life.

Requirements

While officer certification is not mandatory for those entering this occupation, it may be obtained through the Nautical Institute of the Nova Scotia Community College. A fishing license is required by all those in this occupation and can be obtained from the Federal Department of Fisheries and Oceans Canada in Halifax.

Training Paths

Individuals in this occupation generally have been involved with the fishing industry for a number of years before the position of officer is obtained. For those who desire more formal training, courses are offered at the Nautical Institute of the Nova Scotia Community College for Fishing Master, levels I, II, III and IV. Entrance to these courses is limited to those individuals currently holding certification as a Navigation Cadet. Additionally, a variety of fishing-related courses are available at the Fisheries Training Centre in Pictou for those wishing to upgrade their skills.

Skills/Aptitudes

Individuals in this occupation should have a valid eye sight test certificate and possess strong leadership abilities. Exposure to various weather conditions and varying climates, often while travelling for long periods at a time, is required. The work is very seasonal in nature.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **980**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **N/A**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

WATER TRANSPORTATION, N.E.C.

Nature of the Work
This occupational group is concerned with water transport activities. Responsibilities include operating ships communication equipment, operating lighthouses, inland waterway and canal systems, drawbridges, motorboats and cable ferries.

Requirements
There are no formal training or certification requirements for entrance into these occupations.

Training Paths
Individuals entering these occupations receive the bulk of their training through on-the-job work experience.

Skills/Aptitudes
Individuals interested in these occupations should enjoy working outdoors close to the sea or other waterways.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **310**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential
- Estimated average annual earnings in 1989: **$23,000**

Mining and Quarrying Occupations

BLASTING OCCUPATIONS

Nature of the Work

This occupational group is concerned with transporting, preparing, positioning and detonating explosives to dislodge ore, coal and other minerals in mines and quarries; and in building and road excavation. Duties may involve post hole blasting, well digging, stump removal, seismic blasting, and underwater blasting.

Requirements

An individual working in these occupations must be certified by the Board of Examiners at the Nova Scotia Department of Labour.

Training Paths

The method of training for this occupation is on-the-job under the supervision of a certified blaster. After a minimum of six months work experience, the candidate is eligible to write the Class Four examination. The individual may progress from Class Four to Class One based on the accumulation of work experience and the successful completion of the previous class. Candidates are required to do self study before writing each examination. A minimum age of nineteen years is required for certification.

Skills/Aptitudes

Individuals in these occupations must be able to follow precise instructions and obey safety regulations. The ability to work as a member of a team is also necessary. As most of the work is done outdoors, exposure to weather conditions, noise, vibration, and dust is characteristic of the job.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **60**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Board of Examiners for Certification of Blasters
Department of Labour
P.O. Box 697
Halifax, Nova Scotia
B3J 2T8

ROTARY WELL-DRILLERS (PETROLEUM)

Nature of the Work

This occupation is concerned with rotary drilling to search for or to extract oil and natural gas from the earth. Duties may include assembling, erecting, and operating drilling rigs; handling drill pipes, bits, casings, and downhole measuring instruments; performing routine sampling and testing; servicing drilling rigs and related equipment; and operating heavy mobile equipment. Rotary well-drillers may work closely with a highly motivated team of petroleum drilling, production or reservoir engineers, or geologists and geophysicists, or a variety of other technical specialists.

Requirements

While there are no formal training requirements for individuals in this occupation, the completion of a training program will greatly enhance employment prospects.

Training Paths

A two-year program in Petroleum Resources Technology is available at the Institute of Technology in Halifax, of the Nova Scotia Community College. The minimum entrance requirement is the twelfth grade with emphasis in mathematics, physics and chemistry. Upon completion of the two-year program, the graduates may elect to seek employment in industry or government, or they may pursue a degree in Petroleum Engineering. Alternatively, an individual could begin their career in a junior position and gain knowledge of all drilling operations by working in various positions under supervision.

Skills/Aptitudes

Individuals in this occupation should be prepared to accept working outdoors in all kinds of weather. Exposure to noise, dust and petroleum products is normal. Manual dexterity and physical strength are required.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **90**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

J06

SUPERVISORS, INSPECTING - MINERAL TESTING AND SAMPLING

Most Significant Occupations in this Group

CCDO#	Title
8116	Inspecting, Testing, Grading and Sampling Occupations, Mineral Ore Treating
8110	Supervisor, Mineral Ore Treating Occupations

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers engaged in mineral exploration, surface and underground mining, surveying, mineral processing, and preparing mineral ore samples. Activities may include inspecting, testing, grading and sampling mineral ore; performing mineral sample evaluation tests; and performing other quality control activities.

Requirements

Experience in minerals laboratory operations is an essential requirement for individuals in these occupations. Formal training would be a definite asset, as would supervisory training.

Training Paths

Training in this field is generally provided on-the-job. In Nova Scotia a person should be at least sixteen years old and have completed the tenth grade or its equivalent. The supervisor must have a thorough knowledge of the related machinery, tools, materials and procedures, as well as a sound background in the mineral testing and treating industry. It is recommended that individuals interested in this field take additional training. A three-year, co-operative education-based course in Mineral Technology exists at the University College of Cape Breton in Sydney. This course requires the completion of the twelfth grade or its equivalent for admission.

Skills/Aptitudes

Manual dexterity, stamina, and an interest in chemistry and mineralogy are important in these occupations. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **20**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$35,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Department of Mines and Energy
P.O. Box 1087
Halifax, Nova Scotia
B3J 2X1

J01

SUPERVISORS, MINING

Nature of the Work
This occupational group is concerned with supervising and co-ordinating the activities of workers engaged in open pit and underground mining and quarrying; oil, natural gas and water well-drilling and servicing; and construction drilling and tunnelling projects.

Requirements
While no formal education is required for individuals working in this occupation, previous related work experience is essential. A physical examination must be passed in order to work in an underground mine.

Training Paths
Training in this field is generally provided on-the-job. However, the process can be accelerated by higher levels of education which would normally require that a person be at least sixteen years old and have completed the tenth grade or its equivalent, although people with less education are sometimes accepted. The supervisor must have a working knowledge of the related machinery, tools, materials and procedures, as well as a sound background in the mining industry.

Skills/Aptitudes
Manual dexterity and a mechanical aptitude are important skills in this occupation. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **360**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential
- Estimated average annual earnings in 1989: **$39,000**

FOR FURTHER INFORMATION CONTACT:

Mining Society of Nova Scotia
88 Leaside Drive
Sydney, Nova Scotia
B1R 1S6

Farming and Forestry Occupations, Skilled

SKILLED FARMING OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
7112	Farmers
7182	Farm Workers
7131	Farm Management Occupations
7180	Supervisor, Other Farming, Horticultural and Animal-Husbandry Occupations
7197	Farm Machinery Operators and Custom Operators

Nature of the Work

This occupational group is concerned with working on or operating a farm. Activities may include operating farm machinery; performing managerial or supervisory activities such as planning, organizing, directing and controlling the operation of farms, farm holdings, or a landscaping business; and supervising and co-ordinating the activities of the workers involved. Many types of farming are seasonal in nature. Although many farm operators and managers on crop farms work from sunup to sundown during the planting and harvesting seasons, they often work full time on the farm only six to seven months a year, and many have second jobs off the farm.

Requirements

There are no formal entrance requirements for individuals wishing to enter these occupations.

Training Paths

The majority of training is provided on-the-job. Individuals interested in these occupations may apply to the Nova Scotia Agricultural College in Truro for training in many different areas of farming. These programs are two to four years in length. Successful completion of the twelfth grade or its equivalent with an emphasis on science and mathematics is generally specified as a prerequisite for acceptance into these programs.

Skills/Aptitudes

Individuals in this occupation should have an interest in the farming industry and enjoy working outdoors. They should keep abreast of continuing advances in farming methods. Farmers should be willing to try new processes and adapt to the constantly changing technologies to produce their crops or raise their livestock more efficiently. Mechanical aptitude is also valuable for the operator of a small farm.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,840**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **190**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$18,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Agricultural College
P.O. Box 550
Truro, Nova Scotia
B2N 5E3

K01

SKILLED FORESTRY OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
7510	Supervisor, Forestry and Logging Occupations
7511	Forestry Conservation Occupations
7516	Log Inspecting, Grading, Scaling and Related Occupations

Nature of the Work

This occupational group is concerned with maintaining, protecting and conserving forests; cutting and scaling forest products; moving wood from harvesting operations to storage or transportation areas; and performing silvicultural treatments. Most harvesting and silviculture jobs involve lifting and other strenuous activities. Forest workers encounter unusually hazardous conditions due to falling trees and branches and the dangers associated with wood handling equipment and use of chainsaws.

Requirements

Although there are generally no formal requirements for entrance into these occupations, many employers and institutions require some education or experience in the field.

Training Paths

Individuals interested in these occupations may receive training through the Forestry programs offered at each of the Annapolis, Cumberland, and Lunenburg Campuses, the Nautical Institute, and the Cape Breton Adult Vocational Training Campus of the Nova Scotia Community College. These programs are one year in length and include extensive field work. Successful completion of the tenth grade or its equivalent and a forestry-related background is generally specified as a prerequisite for acceptance into these programs. A Bachelor of Science in Forestry is offered at the University of New Brunswick in Fredericton. Emphasis in this program is placed on quantitative decision-making skills, computer-based technology, and the sciences. Master's and Doctoral degrees in Forestry are also offered at this institution. Individuals may also further their education at the Forest Ranger School in New Brunswick.

The Commercial Safety College in Truro also offers two courses in Silviculture of five to six weeks in duration. The Forestry Regional Industrial Training Committee (RITC) offers programs in Herbicide Application, Hydraulics, and on-site training programs in Forest Harvesting and Silviculture. The Maritime Lumber Bureau in Amherst offers a Lumber Grading program; and the Scaling School of the Nova Scotia Department of Lands and Forests conducts related courses. The above institutions should be contacted for further information.

Skills/Aptitudes

Individuals should have an aptitude for map reading, good observational skills, be physically fit, and enjoy being outdoors. Effective communication skills, both oral and written, are important, as is the ability to work both independently and as part of a team. An interest in the sciences at the high school level is important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **380**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **40**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Forestry Association
Suite 202
64 Inglis Place
Truro, Nova Scotia
B2N 4B4

or

Nova Scotia Forest Products Association
P.O. Box 696
Truro, Nova Scotia
B2N 5E5

or

Nova Scotia Department of
Lands and Forests
P.O. Box 698
Halifax, N.S.
B3J 2T9

K02

Labouring, Elemental and Semi-Skilled Occupations

ELEMENTAL, MACHINE-RELATED, INDOOR

Most Significant Occupations in this Group

CCDO#	Title
9317	Packaging Occupations, N.E.C.
8563	Sewing Machine Operators, Textile and Similar Materials
8149	Metal Processing and Related Occupations, N.E.C.
6162	Laundering Occupations
8215	Slaughtering and Meat Cutting, Canning, Curing and Packing Occupations

Nature of the Work

This occupational group encompasses a wide variety of machine related occupations which do not require a high degree of formal training and which involve work performed inside a home, building, or other structure. Examples include packaging, laundering, and sewing machine operations.

Requirements

here are no formal requirements for the majority of occupations within this group, other than a minimum age of sixteen years.

Training Paths

Training for these occupations is generally in the form of on-the-job training provided by the employer.

Skills/Aptitudes

Individuals in these occupations should have good physical health and be able to carry out instructions given by a supervisor.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **10,100**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **980**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$20,000**

ELEMENTAL, MACHINE-RELATED, OUTDOOR

Most Significant Occupations in this Group

CCDO#	Title
8711	Excavating, Grading and Related Occupations
7717	Mining and Quarrying, Cutting, Handling and Loading Occupations
9315	Material-Handling Equipment Operators, N.E.C.
9311	Hoisting Occupations, N.E.C.
8713	Paving, Surfacing and Related Occupations

Nature of the Work

This occupational group encompasses a wide variety of machine related occupations which do not require a high degree of formal training and which generally involve work performed out-of-doors. Examples include mining, cutting, excavating, hoisting, and material handling.

Requirements

There are no formal requirements for the majority of occupations within this group, other than a minimum age of sixteen years.

Training Paths

Training for these occupations is generally in the form of on-the-job training provided by the employer.

Skills/Aptitudes

Individuals in these occupations should have good physical health and strength and be able to carry out instructions given by a supervisor.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **5,800**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **540**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$28,000**

GENERAL LABOURING, HIGH STRENGTH

Most Significant Occupations in this Group

CCDO#	Title
9313	Longshore Workers, Stevedores and Freight Handlers
8798	Occupations in Labouring and Other Elemental Work
7513	Timber Cutting and Related Occupations
9318	Occupations in Labouring and Other Elemental Work Material Handling, N.E.C.

Nature of the Work

This occupational group encompasses a wide variety of general labouring occupations requiring a high level of strength and physical endurance. Examples include mining labourer, construction labourer, longshore worker, and timber cutter.

Requirements

There are no formal requirements for the majority of occupations within this group, other than a minimum age of sixteen years.

Training Paths

Training for these occupations is generally in the form of on-the-job training provided by the employer.

Skills/Aptitudes

Individuals in these occupations should have good physical health and strength and be able to carry out instructions given by a supervisor.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **15,050**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **1,200**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$29,000**

A00

GENERAL LABOURING, LOW STRENGTH

Most Significant Occupations in this Group

CCDO#	Title
6191	Janitors, Charworkers and Cleaners
8217	Fish Canning, Curing and Packing Occupations
6198	Occupations in Labouring and Other Elemental Workers
7195	Nursery and Related Workers
5145	Service Station Attendants

Nature of the Work

This occupational group encompasses a wide variety of general labouring occupations which do not require a high degree of strength. Examples include service station attendant, chambermaid, and street vendor.

Requirements

There are no formal requirements for the majority of occupations within this group, other than a minimum age of sixteen years.

Training Paths

Training for these occupations is generally in the form of on-the-job training provided by the employer.

Skills/Aptitudes

Individuals in these occupations should have good physical health and be able to carry out instructions given by a supervisor.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **27,310**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **2,390**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$24,000**

SEMI-SKILLED, MACHINE-RELATED, INDOOR

Most Significant Occupations in this Group

CCDO#	Title
8541	Cabinet and Wood Furniture Makers
9512	Printing Press Occupations
8179	Chemical, Petroleum, Rubber, Plastic, Related Materials Processing Occupations, N.E.C.
9519	Printing and Related Occupations, N.E.C.
8337	Boilermakers, Platers and Structural Metal Workers

Nature of the Work

This occupational group encompasses a wide variety of machine related occupations which do not require a high degree of formal training and which generally involve work performed inside a building, office, or other structure. Examples include machine tool operator, printing press operator, and cabinet-maker.

Requirements

There are no formal requirements for the majority of occupations within this group, other than a minimum age of sixteen years.

Training Paths

Training for these occupations is generally in the form of on-the-job training provided by the employer.

Skills/Aptitudes

Individuals in these occupations should have good physical health and be able to carry out instructions given by a supervisor.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **3,230**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **320**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$27,000**

E00

SEMI-SKILLED OCCUPATIONS, N.E.C.

Most Significant Occupations in this Group

CCDO#	Title
6115	Guards and Related Security Occupations
4172	Mail Carriers
3375	Attendants, Sport and Recreation
4191	Collectors
8786	Insulating Occupations, Construction

Nature of the Work

This occupational group encompasses a wide variety of occupations which do not require a high degree of formal training. Examples include cashier and teller, guard and watchman/woman, mail carrier, and railway conductor.

Requirements

There are no formal requirements for the majority of occupations within this group, other than a minimum age of sixteen years.

Training Paths

Training for these occupations is generally in the form of on-the-job training provided by the employer.

Skills/Aptitudes

Individuals in these occupations should have good physical health and be able to carry out instructions given by a supervisor.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **8,660**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **800**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$26,000**

Supervisors, Foremen/women and Inspectors

FOOD SERVICE SUPERVISORS/TECHNICIANS

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the day to day operation of a food service department. Specific responsibilities may include the collection of patient data required to ensure proper diet; preparation and service of patient and staff meals, and distribution of patient trays in a hospital, institutional or industrial setting; supervision of trayline and warewashing areas; and training of staff and students. Individuals may be responsible for collecting, analyzing, and preparing all financial reports and inventory control statements. Food service supervisors and technicians are on their feet most of the time and are often expected to work weekends and holidays.

Requirements

Completion of the twelfth grade with an emphasis on chemistry and biology is required. Job prospects are enhanced with membership in the Canadian Food Service Supervisor Association as employers recognize the high standards required of its members. New members are required to pass an entrance examination. Employer preference will be given to graduates of a home economics program.

Training Paths

The Canadian Food Service Supervisor Association (CFSSA), in conjunction with the Canadian School of Management, offers a bachelor level program in Health Services Administration in Food Management for members with CFSSA certification. Mount Saint Vincent University offers a four-year Bachelor of Home Economics degree program with a major in Foods and Nutrition and a specialization in Food Service Administration. A two-year diploma course in Food Service Technology is offered at the Institute of Technology, in Halifax, of the Nova Scotia Community College. These programs require successful completion of the twelfth grade for entry.

Skills/Aptitudes

Individuals in these occupations are in constant contact with the public. Mental and visual demands are above average. The ability to make sound judgments and take initiative are important for food service supervisors and technicians. Teaching skills as well as basic nutrition and a knowledge of therapeutic diets is required. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,420**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **250**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$21,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Food Service Supervisors Association
P.O. Box 207
Armdale, Nova Scotia
B3L 4J9

L01

INSPECTORS, GOVERNMENT AND NON-GOVERNMENT

Most Significant Occupations in this Group

CCDO#	Title
1116	Inspectors and Regulatory Officers, Government
1176	Inspectors and Regulatory Officers, Non-Government

Nature of the Work

This occupational group is concerned with inspecting, testing, grading, and sampling in both government and non-government sectors. Responsibilities include enforcing adherence to laws and regulations and observance of the organization's policies and procedures, providing advice on health matters, quality of service, safety and other regulations and standards in organizations or agencies. These individuals are often involved in field work, and some inspectors travel frequently. Many inspectors work long and often irregular hours.

Requirements

There are no formal requirements for entrance to the occupations in this group; however, previous experience in the field may be necessary.

Training Paths

Training for these occupations is generally on-the-job. The length and type of training depends on both the employer and the industry in which the individual is working.

Skills/Aptitudes

Individuals in these occupations should possess an interest in the field in which they are working. Good observational, analytical, and communication skills are important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,390**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **90**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$36,000**

SUPERVISORS, ACCOMMODATION

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers engaged in providing accommodation services in hotels, motels, trailer parks, apartment houses, office buildings and similar facilities. Activities may include executing work schedules; retaining supply stock; hiring and assigning duties to staff; recommending or initiating personnel changes; training workers; and evaluating employee performance. Individuals in this occupation are often required to work evenings, weekends and holidays.

Requirements

There are no formal entrance requirements for individuals in this occupation; however, the opportunity for advancement to this position is increased according to the amount of education and experience one possesses.

Training Paths

In this occupation, education in management and hospitality services is a definite asset. A four-year program entitled Tourism and Hospitality Management is offered at Mount Saint Vincent University in Halifax and a two-year program entitled Hospitality Administration is available at the University College of Cape Breton in Sydney. A two-year program entitled Hotel-Motel Restaurant Management is offered at the I.W. Akerly Campus of the Nova Scotia Community College. The Pictou Campus and the Lunenburg Campus offer a two-year diploma program in Hospitality Services. Entrance into the above programs requires the eleventh grade require completion of the twelfth grade, the only exception being Hotel-Motel Restaurant Management which requires completion of the eleventh grade.

Skills/Aptitudes

Individuals in this occupation should possess good fundamental mathematics, management, and administrative skills. An aptitude for neatness and cleanliness, a friendly disposition, and the desire to perform duties of a routine nature are important. The individual should also be able to create a positive working atmosphere for his/her staff.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,310**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **130**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: $17,000

L02

SUPERVISORS, FOOD AND BEVERAGE PROCESSING

Most Significant Occupations in this Group

CCDO#	Title
8210	Supervisor, Food, Beverage and Related Processing Occupations
8226	Inspecting, Testing, Grading, Sampling Occupations: Food, Beverage, and Related Processing

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers engaged in preparing food and related products for domestic or commercial use. Responsibilities may include inspecting, testing, grading, and sampling work concerned with quality control activities.

Requirements

Previous related work experience is essential for individuals in these occupations.

Training Paths

Training in this field is generally provided on-the-job. In Nova Scotia, a person must be sixteen years old and have completed the tenth grade or its equivalent, although people with less education are sometimes accepted. The supervisor must have a thorough knowledge of the related machinery, tools, materials, and procedures, as well as a sound background in the processing industry. Additionally, a Quality Control Food Testing program is available at Kingstec in Kentville. This one-year course requires completion of the eleventh grade for admission with preference to students with the twelfth grade.

Skills/Aptitudes

People in these occupations must be able to work alone and as part of a team. A keen sense of taste and smell, the stamina to stand for hours at a time, and personal cleanliness are important qualifications. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **760**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **110**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$26,000**

FOR FURTHER INFORMATION CONTACT:

Canadian Food Processors Association
Suite 102
2200 Lakeshore Boulevard West
Toronto, Ontario
K1P 5G4

or

Farmer's Dairy
P.O. Box 8114
Station A
Halifax, Nova Scotia
B3K 5L8

or

Seafood Producers of Nova Scotia
P.O. Box 991
Dartmouth, Nova Scotia
B2Y 3Z6

L08

SUPERVISORS, INSPECTING—CHEMICALS

Most Significant Occupations in this Group

CCDO#	Title
8160	Supervisor, Chemicals, Petroleum, Rubber, Plastics, and Related Materials Processing Occupations
8176	Inspecting, Testing, Sampling Occupations, Chemicals, Petroleum, Rubber, Plastics and Related Materials Processing

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers engaged in refining, processing and preparing petroleum, chemicals, coal, rubber, plastic and related materials for subsequent use. Responsibilities may include inspecting, testing, grading, and sampling work concerned with quality control activities.

Requirements

While there are no formal requirements, individuals in these occupations typically have completed the twelfth grade or its equivalent and a Bachelor's degree in Science with a major in Chemistry, although people with less education are sometimes accepted. Previous related experience is also important.

Training Paths

Three- and four-year degree programs are available at various universities in the Province. The University College of Cape Breton in Sydney offers a three-year program in Chemical Technology from which individuals may transfer to university programs. Individuals may also enroll in a two-year Petroleum Resources Technology program at the Institute of Technology, in Halifax, of the Nova Scotia Community College. Completion of the twelfth grade is required for entry into the above programs. Training in these occupations is generally provided on-the-job. The supervisor must have a thorough knowledge of the properties of petroleum, coal, rubber and plastic and be proficient in the use of all related machinery and tools.

Skills/Aptitudes

Individuals must have a keen eye for detail and be capable of conducting exacting procedures repeatedly. Manual dexterity, stamina and ability to work with machinery are important skills required in these occupations. He/she must be capable of supervising the staff and maintaining production schedules. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **160**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

L07

SUPERVISORS, INSPECTING—CONSTRUCTION

Most Significant Occupations in this Group

CCDO#	Title
8780	Supervisor, Other Construction Trades Occupations
8796	Inspecting and Testing Occupations, Construction, Except Electrical

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers involved in erecting, repairing and maintaining buildings and other works. Responsibilities may include inspecting, testing, grading and sampling work concerned with quality control activities.

Requirements

Previous related experience is essential for individuals in these occupations.

Training Paths

Training in this field is generally provided on-the-job. In Nova Scotia, a person must be at least sixteen years old and have completed the tenth grade or its equivalent, although people with less education are sometimes accepted. The supervisor must have a thorough knowledge of the related machinery, tools, materials and procedures, as well as a sound background in the construction industry. It is recommended that individuals interested in this field take a two-year program such as Construction Administration Technology offered at the Institute of Technology, in Halifax, Nova Scotia Community College or a three-year program in Construction Technology offered at the University College of Cape Breton in Sydney. Both of these programs require completion of the twelfth grade or its equivalent for entrance.

Skills/Aptitudes

Individuals in these occupations should be in good physical condition. Manual dexterity, stamina, and a mechanical aptitude are important skills in these occupations. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,370**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **320**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$36,000**

FOR FURTHER INFORMATION CONTACT:

Construction Association of Nova Scotia
P.O. Box 1476
Halifax, Nova Scotia
B3H 5H7

SUPERVISORS, INSPECTING—MACHINING

Most Significant Occupations in this Group

CCDO#	Title
8526	Inspecting and Testing Occupations, Fabricating and Assembling Metal Products, N.E.C.
8520	Supervisor, Fabricating and Assembling Occupations, Metal Products, N.E.C.
8396	Inspecting and Testing Occupations, Machining, N.E.C.

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers engaged in metal processing to make semi-finished or finished products. Responsibilities may include inspecting, testing, grading, and sampling work concerned with quality control.

Requirements

The occupation of machinist is a designated trade in Nova Scotia. Individuals working at the supervisory/inspecting level would generally be required to possess journeyman/woman status.

Training Paths

For more information on how to train in the machinist trade, consult the occupational group, Machinist Occupations. At least three to five years of additional work experience is usually required to work at the level of a supervisor/inspector.

Skills/Aptitudes

Individuals entering these occupations should be mechanically inclined, have a sound knowledge of machines, and be familiar with machining techniques and the properties of metal. Effective communication and supervisory skills are essential. Physical fitness is also important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **250**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$27,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

L26

SUPERVISORS, INSPECTING—METAL PROCESSING

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers engaged in metal processing to make semi-finished or finished metal products, and ensuring conformity with customer drawings and specifications. Responsibilities may include inspecting, testing, grading, and sampling work concerned with quality control. Individuals are also responsible for the efficient staffing of production processes to improve productivity while maintaining defined product quality.

Requirements

For individuals in these occupations, previous related work experience is essential, particularly in blueprint reading and the interpretation of a variety of measuring devices.

Training Paths

Training in this field is generally on-the-job. In Nova Scotia, an individual must be at least sixteen years old and have completed the tenth grade or its equivalent. Individuals in these occupations must be proficient in the use of all related machinery. This usually requires at least three to five years of experience in a related, junior position.

Skills/Aptitudes

Individuals entering these occupations should be mechanically inclined, have a sound knowledge of machines, and be familiar with metal processing techniques and the properties of metal. Effective communication and supervisory skills are essential. Physical fitness is also important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **80**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$32,000**

FOR FURTHER INFORMATION CONTACT:

Manager, Human Resources
Trenton Works Lavelin P.O. Box 130
Trenton, Nova Scotia
B0K 1X0

SUPERVISORS, INSPECTING—PULP AND PAPER

Most Significant Occupations in this Group

CCDO#	Title
8255	Inspecting, Testing, Grading and Sampling Occupations, Pulp and Paper Making
8250	Supervisor, Pulp and Paper Making and Related Occupations

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers involved in converting wood fiber into pulp, making newsprint, and finishing paper and paperboard. Responsibilities may include direct supervision of manpower, inspecting, testing, grading, and sampling work concerned with quality control activities and production.

Requirements

While there are no formal education requirements for individuals in these occupations, most companies have minimum entry education standards. Experience is the major requirement.

Training Paths

Training in this field is generally provided on-the-job. In Nova Scotia, a person should be sixteen years old and have completed the tenth grade or its equivalent, although people with less education are sometimes accepted. The supervisor must have a thorough knowledge of the related machinery, tools, materials, and procedures, as well as a sound background in the pulp and paper industry. He/she must be capable of supervising staff and maintaining production schedules.

Skills/Aptitudes

Manual dexterity, stamina and a mechanical aptitude are important skills required in these occupations. Leadership and effective oral and written communication skills are essential, as well as the ability to work within a team environment.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **210**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$40,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Relations Manager
Bowater Mersey Paper Company Limited
P.O. Box 1150
Liverpool, Nova Scotia
B0T 1K0

or

Scott Maritimes Limited
P.O. Box 5490
New Glasgow, Nova Scotia
B2H 5E8

L10

SUPERVISORS, INSPECTING—RUBBER AND PLASTIC PRODUCTS

Most Significant Occupations in this Group

CCDO#	Title
8576	Inspecting, Testing, Grading, and Sampling Occupations, Fabricating, Assembling, Repairing, Rubber, Plastic
8570	Supervisor, Fabricating, Assembling, Repairing Occupations, Rubber, Plastic, Related Products

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers engaged in fabricating, assembling and repairing rubber, plastic and related products. Responsibilities may include inspecting, testing, grading, and sampling work concerned with quality control activities.

Requirements

Previous experience is essential for individuals in these occupations.

Training Paths

Training in this field is generally provided on-the-job. In Nova Scotia, a person must be at least sixteen years old and have completed the tenth grade or its equivalent, although people with less education are sometimes accepted. The supervisor must have a thorough knowledge of the related machinery, tools, materials and procedures, as well as a sound background in the rubber and/or plastics industry.

Skills/Aptitudes

Manual dexterity, stamina, a mechanical aptitude and experience with machinery and tools are important skills required in these occupations. The ability to carry out exacting procedures repeatedly is also important. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **710**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **90**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$34,000**

SUPERVISORS, INSPECTING—TEXTILE PROCESSING

Most Significant Occupations in this Group

CCDO#	Title
8276	Inspecting, Testing, Grading and Sampling Occupations, Textile Processing
8260	Supervisor, Textile Processing Occupations

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers involved in processing textile fibers into yarn or thread; and weaving, knitting and finishing fabrics. Responsibilities may include inspecting, testing, grading, and sampling work concerned with quality control activities.

Requirements

Previous experience is essential for individuals in these occupations.

Training Paths

Training in this field is generally provided on-the-job. In Nova Scotia, a person generally must be sixteen years old and have completed the tenth grade or its equivalent, although people with less education are sometimes accepted. Individuals in these occupations must learn specific duties and processes depending upon the materials being processed. The supervisor must have a thorough knowledge of various textiles and fabrics. The individual must have experience in production and in maintaining production schedules as well as knowledge of the capabilities and functions of all the related machinery.

Skills/Aptitudes

Individuals in these occupations must have stamina and be capable of standing for long periods of time. They must be methodical and have good hand/eye co-ordination. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **240**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$21,000**

FOR FURTHER INFORMATION CONTACT:

Stanfields Limited
Logan Street
Truro, Nova Scotia
B2N 5C2

or

Nova Scotia Textiles Limited
Nesbitt Street
Windsor, Nova Scotia
B0N 2T0

L11

SUPERVISORS, INSPECTING—WOOD PRODUCTS AND PROCESSING

Most Significant Occupations in this Group

CCDO#	Title
8230	Supervisor, Wood Processing Occupations, Except Paper Pulp
8540	Supervisor, Fabricating, Assembling and Repairing Occupations, Wood Products
8236	Inspecting, Testing and Grading Occupations, Wood Processing, Except Paper Pulp
8350	Supervisor, Wood Processing Occupations
8356	Inspecting Occupations, Wood Machining

Nature of the Work

This occupational group is concerned with supervising and co-ordinating the activities of workers involved in sawing and preparing lumber and related materials for use; shaping wood into parts or products by machining; and treating wood with preservatives and fire-retardants. Responsibilities may include inspecting, testing, grading and sampling work concerned with quality control activities in wood processing, except in pulp and paper making.

Requirements

Previous related experience is essential for individuals in these occupations.

Training Paths

Training in this field is generally provided on-the-job. In Nova Scotia, a person must be sixteen years old and have completed the tenth grade or its equivalent, although people with less education are sometimes accepted. The supervisor must have a thorough knowledge of the related machinery and tools, as well as a sound background in the properties of materials being processed and the procedures to be utilized. He/she must be capable of supervising staff and maintaining production schedules. Individuals wishing to advance in this field should consider additional training at the Nova Scotia Agricultural College in Truro.

Skills/Aptitudes

Manual dexterity, stamina, and a mechanical aptitude are important skills required in these occupations. Supervisory and effective communication skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **270**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$23,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Forest Products Association
P.O. Box 696
Truro, Nova Scotia
B2N 5E5

Trade Occupations

AIRCRAFT FABRICATING AND ASSEMBLING OCCUPATIONS, N.E.C.

Nature of the Work

This occupational group is concerned with assembling aircraft and aircraft subassemblies such as power plants, undercarriages, and tails and wings, normally using manufactured components. Activities may include: fitting, bolting, riveting, and adjusting fabricated or assembled equipment using common or special hand or power tools, jigs and fixtures.

Requirements

While there are no formal requirements to work in these occupations, the best way to gain entrance to the occupation is through the Sheet Metal Apprenticeship program.

Training Paths

There are two ways to obtain this training in Nova Scotia. Individuals may receive basic training through a two-year Sheet Metal program offered at several campuses of the Nova Scotia Community College. Alternatively, individuals may seek employment directly with an employer and proceed through the block release program. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the tenth grade or its equivalent. The term of apprenticeship is generally four years. Once the apprenticeship program is completed, further training is usually provided on-the-job under the supervision and instruction of more experienced employees.

Skills/Aptitudes

Individuals in these occupations should have high school courses in mathematics, science, and industrial arts. A keen interest in working with machines and routine processes is required. Some shift work may be required as well as the ability to work near noise and vibration.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **190**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$29,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

M21

AIRCRAFT MAINTENANCE ENGINEERS

Nature of the Work

This occupational group is concerned with repairing aircraft frames, engines, and accessories. Activities may include servicing and overhauling aircraft and aircraft engines to ensure airworthiness; repairing, assembling and testing aircraft accessories such as power-brake systems, fuel-injection systems, and hydraulic and vacuum pumps; installing and servicing fabric-aircraft-surface coverings; and repairing pneumatic de-icers used in aircraft.

Requirements

Entrance into these occupations requires the successful completion of a Department of Transport Federally-approved Aircraft Maintenance Engineer Training program.

Training Paths

While there is no training available for these occupations in Nova Scotia, approved programs exist in Moncton, New Brunswick, Gander, Newfoundland, and Scarborough, Ontario. These courses are generally one year in length and require the completion of the twelfth grade or its equivalent with an emphasis on mathematics and physics. Upon completion of these programs the individual requires four years of combined training and on-the-job experience in order to qualify for the Aircraft Maintenance Engineers (AME) license. The Dartmouth Adult Vocational Training Campus of the Nova Scotia Community College, offers a ten-month Aircraft Technician program requiring completion of the tenth grade for entrance.

Skills/Aptitudes

Individuals in these occupations should have good manual dexterity as well as a mechanical and technical aptitude. The ability to follow instructions and perform to a high degree of accuracy is very important. Good eyesight and hearing are required. Some shift work may be required. As new and more complex aircraft are designed, mechanics must update their skills. A strong background in electronics may be helpful.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **550**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **40**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

FOR FURTHER INFORMATION CONTACT:

Aircraft Maintenance Engineers (Atlantic) Incorporated
Site 16, R.R. #1
P.O. Box 9
Fredericton, New Brunswick
E3B 4X2

M06

BOILERMAKERS, PLATERS, AND STRUCTURAL METAL FABRICATORS

Nature of the Work

This occupational group is concerned with fabricating, assembling, erecting and repairing boilers, and fabricating structural-metal parts and sub-products for storage tanks, ships, scaffolding, and other structures made from steel plates, tubes, beams or similar materials.

Requirements

While there are a number of occupations within this group, the main requirement for most of them is enrollment in the apprenticeable trade of either Boilermaker or Structural Metal Fabricator. Certification for these trades is not compulsory, however, many employers require that their employees be registered apprentices or holders of Certificates of Qualification. Training for the other occupations in this group is provided on-the-job under the supervision of more experienced employees.

Training Paths

To enter into either of the two apprenticeable trades mentioned above, individuals may seek employment directly with an employer and proceed through the block release program. There are two other alternate routes in which to enter into the trade of Structural Metal Fabricator. Individuals may receive basic training through a one-year program offered at the Cape Breton and Dartmouth Adult Vocational Training Campuses of the Nova Scotia Community College. Individuals obtaining employment in these trades should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in these trades will have completed the tenth grade or its equivalent. The term of apprenticeship is four years for the Structural Metal Fabricator and the Boilermaker.

Skills/Aptitudes

Individuals in these trades should possess a good mechanical aptitude, an understanding of the physical properties of materials, and methods of assembly.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **160**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

M23

BRICKLAYERS AND STONE MASONS

Nature of the Work

This occupational group is concerned with preparing and laying brick, stone, concrete block, tile, marble, refractory and related materials using chisels, hammers, trowels, levels and other hand tools.

Requirements

The occupation of bricklayer is a designated apprenticeable trade with compulsory certification.

Training Paths

There are two entry paths into this occupation. Individuals may receive basic training through a two-year training program offered at several of the Nova Scotia Community College campuses or they may seek employment directly with an employer and proceed through the block release program. Training for this trade takes place on a modular basis with modules being completed at the individual's own pace. Individuals obtaining employment in this trade must register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the ninth grade or its equivalent. The term of apprenticeship for this trade is generally four years.

Skills/Aptitudes

Individuals in this trade should be in good physical condition and be able to work comfortably at heights. A good imagination and creative ability are also assets in this trade.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **690**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **40**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$27,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

CARPENTERS

Nature of the Work

This occupational group is concerned with constructing, renovating and maintaining wooden structures and installing fixtures using power saws, planes, braces, hammers and other carpentry tools.

Requirements

The occupation of carpenter is a designated apprenticeable trade. While certification is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

There are several entry paths into this occupation. Individuals may receive basic training through a two-year program offered at several of the Nova Scotia Community College campuses. Individuals may also seek employment directly with an employer and proceed through the block release program. As a third alternative, individuals may make application through their Canada Employment Centre for a pre-employment course held at the Institute of Technology in Halifax and at the Cape Breton Adult Vocational Training Campus in Sydney of the Nova Scotia Community College. Training for this occupation takes place on a modular basis with modules being completed at the individual's own pace. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the tenth grade or its equivalent and they should have a good understanding of mathematics. The term of apprenticeship for this trade is generally four years.

Skills/Aptitudes

Individuals in this trade should be in good physical condition. They are required, at times, to work under adverse conditions, such as cold and wet weather and to work at varying heights from ladders, staging and on roof tops. Good hand skills and material handling abilities are necessary. Some artistic ability is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **5,740**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **300**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$24,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

M13

CHEFS AND COOKS

Nature of the Work
This occupational group is concerned with planning menus, ordering supplies, and preparing and cooking foods in hotels, restaurants, private households and other non-manufacturing establishments.

Requirements
Within this occupational group, the occupation of cook is a designated apprenticeable trade. While certification is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths
There are several entry paths into this occupation. Individuals may receive basic training through a two-year program offered at the Nova Scotia Community College campuses. Individuals may also seek employment directly with an employer and proceed through the modular program. As a third alternative, individuals may make application through their Canada Employment Centre to a pre-employment course held at the Burridge Campus, the Institute of Technology in Halifax, and the Cape Breton Adult Vocational Training Campus of the Nova Scotia Community College. Theory training for this occupation takes place on a modular basis with modules being completed at the individual's own pace. Typically, individuals in this trade will have completed the ninth grade or its equivalent. The term of apprenticeship is generally three years. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience.

Skills/Aptitudes
Cooks usually require the ability to plan menus and order, store, prepare and cook foods, and to understand and apply the rules of hygiene and sanitation.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **6,220**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **750**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential
- Estimated average annual earnings in 1989: **$17,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

CONSTRUCTION ELECTRICIANS, AND REFRIGERATION AND AIR CONDITIONING MECHANICS

Most Significant Occupations in this Group

CCDO#	Title
8533	Electrical and Related Equipment Installing and Repairing Occupations, N.E.C.
8733	Construction Electricians and Repairers

Nature of the Work

This occupational group is concerned with installing and repairing electrical equipment, such as, domestic appliances, industrial machinery, transport vehicles, aircraft and ships; and installing and repairing wiring in homes, buildings and adjoining areas to provide electric energy. Activities may include installing lighting and other fixed electrical equipment; and making repairs to electrical installations.

Requirements

There are a number of occupations within this group, two of which are construction electrician and refrigeration and air conditioning mechanic. Both of these occupations are designated apprenticeable trades with compulsory certification.

Training Paths

There are two entry paths into these occupations. Individuals may receive basic training through a one- or two-year program offered at several campuses of the Nova Scotia Community College or they may seek employment directly with an employer and proceed through the block release program. Individuals obtaining employment in these trades must register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in these trades will have completed the eleventh grade or its equivalent. The term of apprenticeship is normally four years.

Skills/Aptitudes

Individuals in these trades should have a good foundation in mathematics and science. A good mechanical and electrical aptitude is also important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,870**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **100**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

M11

GLAZIERS

Nature of the Work

This occupational group is involved with preparing and installing glass in buildings and furniture, utilizing bolts, screws, putty, grinding and buffing wheels, glass cutting tools, drills, hand tools and other devices. Activities may include sketching, tracing, selecting size, colour, and type of glass; bending and affixing metal framework around stained glass sections; placing glass in frames, moldings or sashes; installing mirrors or structural glass; and securing prefabricated glass units together.

Requirements

There are no formal entrance requirements to work in this occupation.

Training Paths

The only method of training for this occupation in Nova Scotia is through on-the-job training under the supervision of a more experienced employee. Employers will generally require that new employees be at least sixteen years of age with a minimum tenth grade education. Complete training may last up to three or four years.

Skills/Aptitudes

Although individuals working in this occupation may work outdoors on some projects, most work would be done indoors. Some physical activity is required such as climbing, handling heavy materials, reaching, and crouching. Individuals may be required to work at heights. Precise measurements and specific tools must be used when working with glass.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **250**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$24,000**

FOR FURTHER INFORMATION CONTACT:

A local glazier

INDUSTRIAL, FARM AND CONSTRUCTION MACHINERY MECHANICS

Nature of the Work

This occupational group is concerned with repairing, adjusting and servicing a wide variety of industrial machinery used in production processes. Activities may include disassembling, aligning and fitting parts; occasionally machining semi-finished or repaired parts; and installing and adjusting to specifications.

Requirements

There are a number of occupations within this group, two of which are the designated apprenticeable trades of industrial mechanic and heavy duty equipment repair mechanic. While certification is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification. For the other occupations in this group, it is recommended that these or similar mechanic courses be completed before entering the job market.

Training Paths

There are two entry paths into these trades. Individuals may receive basic training through two-year programs offered at several compuses of the Nova Scotia Community College or at the University College of Cape Breton in such areas as Heavy Duty Equipment Repair, Industrial Mechanics or Farm Equipment Repair. Alternatively, one may seek employment directly with an employer and proceed through the block release program for the apprenticeable trade courses. Individuals obtaining employment in these trades should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in these trades will have completed the tenth grade or its equivalent. The term of apprenticeship is normally four years.

Skills/Aptitudes

Individuals in these occupations are required to have a good understanding of high school science and mathematics and have a good mechanical aptitude.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,390**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **160**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

M08

LOCOMOTIVE OPERATING OCCUPATIONS

Nature of the Work

This occupational group is concerned with operating railway locomotives to carry passengers and freight, and to transfer locomotives to various service and repair facilities within the yard and to other yards. Activities include operating controls of the locomotive; communicating by radio-telephone; understanding train orders, signals and railway rules and regulations; and inspecting the locomotive for adequate fuel supply and proper functioning of equipment.

Requirements

Individuals in these occupations may be required to complete a training course once employed. A minimum age of eighteen is also required.

Training Paths

The only training available in this field is in Gimli, Manitoba. This is an eight-week course which the individual takes after being hired in a position such as locomotive engineer. Typically the tenth or eleventh grade is required although there are no formal requirements in this regard.

Skills/Aptitudes

Individuals in these occupations generally possess an interest in trains, either model or real. They must be willing to travel and be exposed to noise and vibration. A fair amount of manual dexterity is involved due to the precise nature of some of the duties. The ability to follow instructions and strict regulations is also required.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: N/A
- Employment growth between 1989 and 1995 is projected to be: N/A
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: N/A

Unemployment

- The unemployment rate during the third quarter of 1989 was: N/A

Earnings Potential

- Estimated average annual earnings in 1989: N/A

MACHINIST OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
8313	Machinist and Machine-Tool Setting-up Occupations
8310	Supervisors, Metal Machining Occupations
8316	Inspecting and Testing Occupations, Metal Machining

Nature of the Work

This occupational group is concerned with shaping metal into parts or products of specified dimensions. Activities include measuring, turning, boring, milling, sawing, precision grinding and planing. Individuals may be involved in supervising and co-ordinating the activities of other workers.

Requirements

This occupation is a designated apprenticeable trade in this Province. While certification is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

There are several entry paths into these occupations. Individuals may receive basic training through a two-year program offered at several campuses of the Nova Scotia Community College. Individuals may also seek employment directly with an employer and proceed through the block release program. As a third alternative, individuals may make application through their Canada Employment Centre for a pre-employment course held at the Institute of Technology, in Halifax, of the Nova Scotia Community College and at the University College of Cape Breton in Sydney. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the tenth grade or its equivalent. The term of apprenticeship for this trade is typically four years.

Skills/Aptitudes

Individuals in these occupations should have high school courses in mathematics and science and be able to understand engineering drawings and specifications.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,190**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **130**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

M01

MARINE CRAFT FABRICATORS

Nature of the Work

This occupational group is concerned with constructing and servicing ships; and making, assembling and repairing other metal, wood or fiberglass marine craft. Activities may include laying out and shaping parts; aligning, fitting and fastening fabricated parts and components; installing and repairing engines, auxiliary machinery, accessories, rigging and equipment; and making adjustments.

Requirements

There are a number of occupations within this grouping, one of which is marine fitter. This occupation is a designated apprenticeable trade. Although certification is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

There are several entry paths into the marine fitter trade occupation. Individuals may receive basic training through a two-year program offered at several campuses of the Nova Scotia Community College. Individuals may also seek employment directly with an employer and proceed through the block release program. As a third alternative, individuals may make application through their Canada Employment Centre for a pre-employment course held at the Institute of Technology, in Halifax, of the Nova Scotia Community College. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the tenth grade or its equivalent. The term of apprenticeship for this trade is four years.

Skills/Aptitudes

Individuals in this occupation should be mechanically inclined and enjoy working with ships. A good understanding of the specifications and underlying principles of ship construction and operation would be an asset. Some exposure to noise and vibration may be required.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **830**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$29,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

MOTOR VEHICLE MECHANICS

Nature of the Work

There are a number of occupations within this group, three of which are the designated apprenticeable trades of motor vehicle mechanic, bus and transport mechanic, and motor vehicle body repair mechanic. Motor vehicle mechanics and bus and transport mechanics are concerned with repairing and servicing gasoline-powered or diesel-powered motor vehicles. Activities may include testing, diagnosing, disassembling, and replacing parts and assemblies using common or special hand and power tools, machines and equipment. Motor vehicle body repair mechanics are involved in repairing damaged body parts and assemblies, and the interior finishings of automotive vehicles.

Requirements

The occupations of motor vehicle mechanic and bus and transport mechanic are compulsory certified apprenticeable trades and individuals obtaining employment in these occupations must register with the Apprenticeship Section of the Department of Advanced Education and Job Training. The occupation of motor vehicle body repair mechanic is not compulsory certified, however, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

There are several entry paths into these occupations. Individuals may receive basic training through a two-year program offered at either the Institute of Technology, in Halifax, of the Nova Scotia Community College or the University College of Cape Breton in Sydney. Individuals may also seek employment directly with an employer and proceed through the block release program. As a third alternative, individuals seeking training in the motor vehicle mechanic trade may make application through their local Canada Employment Centre for a pre-employment course held at the University College of Cape Breton in Sydney. Individuals obtaining employment in this trade should register with the Apprenticeship Section in order that they may receive credit for their training and experience. Typically, individuals in these trades will have completed the tenth grade or its equivalent. The term of apprenticeship is generally four years.

Skills/Aptitudes

Individuals in these trades should have practical skills, a mechanical aptitude, and patience. A good understanding of the specifications and underlying principles of automotive vehicle construction and operation is necessary. It is also important to keep up with the constant changes in repair techniques and applications.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **5,030**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **280**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$22,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

OIL BURNER INSTALLERS AND MAINTAINERS

Nature of the Work

This occupational group is concerned with the installation, maintenance and repair of oil burners in furnaces used to heat commercial and residential buildings. Duties may include performing combustion tests, repairing faulty burners, and performing various preventative maintenance procedures.

Requirements

The occupation of oil burner is an apprenticeable trade with compulsory certification.

Training Paths

There are two entry paths into the occupation of oil burner. Individuals may make application through their local Canada Employment Centre for a pre-employment course held at the Institute of Technology, in Halifax, of the Nova Scotia Community College, or individuals may seek employment directly with an employer and proceed through the block release program. Individuals obtaining employment in this trade must register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the tenth grade or its equivalent. The term of apprenticeship is three years.

Skills/Aptitudes

Individuals in this occupation should be in good physical condition and possess an aptitude for mathematics.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,520**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **140**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$25,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

OTHER MECHANICS AND REPAIRERS, N.E.C.

Most Significant Occupations in this Group

CCDO#	Title
8580	Supervisors, Mechanics and Repairers, Except Electrical
8589	Other Mechanics and Repairers, Except Electrical, N.E.C.
8586	Inspecting and Testing Occupations, Equipment Repair, N.E.C.

Nature of the Work

This group includes occupations concerned with repairing, adjusting, servicing and installing machines or equipment primarily of a mechanical nature. Knowledge of a specific machine is normally required. Activities may include supervising and co-ordinating activities of workers; and inspecting and testing work involved with quality control activities.

Requirements

The specific entrance requirements for these occupations vary widely depending on the area of specialization. However, some type of mechanical repair course would be beneficial. While certification in this trade is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

There are three possibilities in the Province for this type of training. The first is in the area of small gas engine repair. This program is offered at three of the campuses of the Nova Scotia Community College. It generally requires completion of the tenth grade for admission. The other two alternatives are the programs in Motor Vehicle Repair and Heavy Duty Equipment Repair, which are offered at most of the campuses of the Nova Scotia Community College and the University College of Cape Breton in Sydney. The length of the classroom training is two years and is combined with an additional two years of on-the-job training.

Skills/Aptitudes

It is essential that individuals in these occupations enjoy working with engines and motors. It is important to be both electrically and mechanically inclined. The ability to work well with others and to follow instructions closely are also necessary. Some shift work may be required as well as exposure to noise and vibration.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,900**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **130**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Division
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

PAINTERS

Nature of the Work
This occupational group is concerned with applying paint and related materials to the interior and exterior of buildings and other structures; applying wallpaper and fabrics to walls and ceilings; and posting advertising bills. Other activities include determining the quantity of materials needed, removing old paint and paper, and smoothing surfaces.

Requirements
There are no formal training requirements for this occupation.

Training Paths
Training is usually provided on-the-job in this occupation; however, individuals may apply for a one-year program titled Painting and Wood Finishing offered at the Halifax Campus of the Nova Scotia Community College. Typically, individuals in this trade have successfully completed the ninth grade or its equivalent.

Skills/Aptitudes
Individuals in this trade should have patience and an eye for detail. An artistic ability is a definite asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **1,390**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **120**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential
- Estimated average annual earnings in 1989: **$22,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

PIPEFITTERS, PLUMBERS, SPRINKLER FITTERS

Nature of the Work

This occupational group includes occupations concerned with installing and repairing pipelines, plumbing, fire protection equipment and related equipment for distributing water, gas, steam, sewage or other materials.

Requirements

There are a number of occupations within this group, three of which are designated apprenticeable trades of plumber, sprinkler fitter, and steamfitter/pipefitter. The occupation of plumber is compulsory certified. While the occupation of steamfitter/pipefitter and sprinkler fitter are not compulsory certified, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

To enter into the occupations of plumber and steamfitter/pipefitter, individuals may receive basic training through a one- or two-year program offered at several campuses of the Nova Scotia Community College. Another alternative for individuals wishing to enter either the plumbing, steamfitting/pipefitting, or sprinkler fitting trade is to seek employment directly with an employer and proceed through the block release program. Individuals obtaining employment in these trades should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in these trades will have completed the tenth grade or its equivalent. The term of apprenticeship is typically four years.

Skills/Aptitudes

Individuals in these trades should have the ability to climb, stoop, and work in cramped and awkward conditions. Other important characteristics include manual dexterity, co-ordination, a methodical approach to work, and the ability to plan ahead.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,350**
- Employment growth between 1989 and 1995 is projected to be: **significantly below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **90**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$29,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

PLASTERERS

Nature of the Work
This occupational group is concerned with applying plaster, stucco, and related materials to structural surfaces; securing laths to walls and ceilings; applying coats of plaster, moldings and special effects; spraying fireproofing materials on surfaces; and building and finishing acoustical ceilings and dry walls. Plasterers may inspect plans or specifications of work site to define shape and dimensions of plaster.

Requirements
There are no formal entrance requirements for this occupation.

Training Paths
The only method of training for this occupation in Nova Scotia is through on-the-job training under the supervision of a more experienced employee.

Skills/Aptitudes
Physical strength, manual dexterity and good eye-hand co-ordination are essential. The ability to work well with others is necessary as plasterers often work in teams. An imagination for creating new designs and shapes for the final coat of plaster is recommended.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **380**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **40**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential
- Estimated average annual earnings in 1989: **$26,000**

RAIL MECHANICS

Nature of the Work

This occupational group is concerned with repairing and servicing motive-power units, railway rolling stock, and related equipment. Activities may include servicing and rebuilding mechanical and structural components of railway passenger and freight cars; servicing and replacing electrical, mechanical or pneumatic equipment on street-cars and subway-cars; and repairing compressed-air valves, such as those used in railway rolling stock.

Requirements

This occupation generally requires the completion of an apprenticeship program in heavy duty equipment repair. While certification in this trade is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

Individuals interested in this occupation can receive their training in one of two ways. The first option is to receive basic training through a two-year heavy duty equipment repair program offered at several campuses of the Nova Scotia Community College or at the University College of Cape Breton in Sydney. Completion of at least the tenth grade or its equivalent is generally required for entry. The second option is to seek employment directly with an employer and proceed through the block release program. Individuals obtaining employment in these trades should register with the Apprenticeship Division of the Department of Advanced Education and Job Training in order to receive credit for their training and experience. The term of apprenticeship is four years.

Skills/Aptitudes

Individuals in this occupation should enjoy working with heavy, industrial machinery, in particular, railway rolling stock. It is important to be both electrically and mechanically inclined. The ability to work well with others and to follow instructions closely is also necessary. Some shift work may be required as well as some exposure to noise and vibration.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: N/A
- Employment growth between 1989 and 1995 is projected to be: N/A
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: N/A

Unemployment

- The unemployment rate during the third quarter of 1989 was: N/A

Earnings Potential

- Estimated average annual earnings in 1989: N/A

M07

SHEET METAL OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
8333	Sheet Metal Workers
8330	Supervisors, Metal Shaping and Forming Occupations, Except Machining
8336	Inspecting, Testing Occupations, Metal Shaping and Forming, Except Machining

Nature of the Work

This occupation is concerned with shaping, forming and repairing sheet metal parts or products to specified dimensions. Activities include drafting patterns, measuring, forging, cutting, riveting, shearing, welding and soldering. Individuals may be involved in supervising and co-ordinating the activities of other workers.

Requirements

The occupation of sheet metal worker is a designated apprenticeable trade. While certification is not compulsory, many employers require that their employees be registered apprentices or holders of a Certificate of Qualification.

Training Paths

There are two entry paths into this occupation. Individuals may receive basic training through a two-year program offered at several campuses of the Nova Scotia Community College or they may seek employment directly with an employer and proceed through the block release program. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. The term of apprenticeship is typically four years.

Skills/Aptitudes

Individuals in this trade should have an interest and an aptitude for mathematics, geometric design, drafting, and blueprint reading, as well as the ability to work comfortably at heights.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **670**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$33,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

M02

STATIONARY ENGINEERS

Most Significant Occupations in this Group

CCDO#	Title
9539	Stationary Engine and Utilities Equipment Operating Occupations, N.E.C.
9530	Supervisors, Stationary Engine and Utilities Equipment, Operating

Nature of the Work

This occupational group is concerned with operating and servicing stationary engines and related equipment to provide heat, ventilation, refrigeration, light or power to buildings, industrial plants or other worksites; maintaining utilities services to supply and purify water or to dispose of sewage and waste; and operating pumping and pipeline equipment to carry, store or distribute materials such as oil and natural gas.

Requirements

There are a number of occupations within this group, one of which is the designated apprenticeable trade of stationary engineer. Certification is compulsory, therefore, individuals are required to be registered apprentices or holders of Certificates of Qualification.

Training Paths

There are several entry paths into the stationary engineer occupation. Individuals may receive basic training through a two-year program offered at the Province's Community College. Individuals may also make application through their Canada Employment Centre for a pre-employment course held at the Strait Campus and the Cape Breton Adult Vocational Training Campus of the Nova Scotia Community College. As a third alternative, individuals may seek employment directly with an employer and proceed through the block release program. Individuals obtaining employment in this trade are required to register with the Department of Labour in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the eleventh grade or its equivalent, and they should have a good understanding of physics and mathematics. The term of apprenticeship for this trade is four years.

Skills/Aptitudes

Individuals in this occupation should possess a good mechanical aptitude and mathematical ability.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,670**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **130**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$35,000**

FOR FURTHER INFORMATION CONTACT:

Stationary Engineers Board
Occupational Health and Safety
Nova Scotia Department of Labour
P.O. Box 697
Halifax, Nova Scotia
B3J 2T8

STRUCTURAL METAL ERECTORS

Nature of the Work
This occupational group is involved with raising, positioning, joining and servicing prefabricated structural-metal parts and subassemblies by bolting, screwing, riveting or welding. Duties may involve building, assembling, and installing ornamental, recreational and functional metal and ironwork structures; erecting metal tanks to store liquids and loose materials; and building scaffolding to make frameworks in and around structures such as buildings and industrial sites from which workers may perform duties.

Requirements
There are no formal entrance requirements for entry into this occupation other than a minimum age of 16 years.

Training Paths
To gain experience in this occupation individuals must seek related employment and receive on-the-job training under the supervision of a more experienced employee.

Skills/Aptitudes
Individuals in this occupation should enjoy working outdoors, sometimes at heights, and be able to work under exposure to noise and vibration. Physical strength and manual dexterity are also required.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **180**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential
- Estimated average annual earnings in 1989: **$28,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

SUPERVISORS, INSPECTING—ELECTRICAL POWER

Most Significant Occupations in this Group

CCDO#	Title
8730	Supervisors, Electrical Power, Lighting and Wire Communications Equipment
8731	Electrical Power Line Workers and Related Occupations
8736	Inspecting, Testing Occupations, Electrical Power, Lighting, Communications Equipment, Installation, Repair

Nature of the Work

This occupational group is concerned with erecting, installing and repairing electrical power, lighting and wire communications equipment; and the supervision and co-ordinating of workers involved in the above activities. Duties may include erecting and servicing street lights, repairing and maintaining electrical equipment in generating stations or powerhouses or inspecting, repairing and adjusting electric meters used for recording electric current consumption.

Requirements

One occupation in this group is that of lineman/woman which is a designated apprenticeable trade. While certification is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

To enter into the lineman/woman occupation individuals must seek employment directly with an employer and proceed through the block release program where the employer will release the apprentice to take a block of training. Theory training is conducted through an in-class lecture method at the several campuses of the Nova Scotia Community College. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the tenth grade or its equivalent. The term of apprenticeship is normally four years.

Skills/Aptitudes

Individuals entering the occupation of lineman/woman should possess a good foundation in mathematics and science. Linemen/women are usually required to work outdoors at varying heights and in all kinds of weather.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,370**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **90**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$37,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

TAILORS, DRESSMAKERS

Nature of the Work

This occupational group is concerned with making, altering, and repairing complete items of made-to-measure garments, such as suits and dresses, and performing the more difficult tasks in the manufacture of ready-to-wear garments. Activities may include sewing sample garments for new designs according to pattern specifications, and fitting and altering made-to-measure foundation garments such as girdles and corsets, according to customer's measurements and tastes.

Requirements

While there are no formal requirements to work in these occupations, a degree in home economics would enhance employment prospects in the manufacturing field.

Training Paths

Training in this field is available at Mount Saint Vincent University in Halifax. They offer a four-year Bachelor of Home Economics degree with a major in Clothing and Textiles. This program requires the successful completion of the twelfth grade or its equivalent for admission.

Skills/Aptitudes

Individuals in these occupations need good eyesight and a liking for fine, close work which may be very detailed and intricate. While artistic imagination and craft skills to turn an idea into a garment are important, it is equally necessary that the individual be prepared to adapt their ideas to other people's tastes. The ability to follow directions closely and accept instructions from both clients and supervisors are also required.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **250**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$14,000**

TOOL AND DIE MAKERS

Nature of the Work

This occupational group is involved in constructing, repairing, and testing custom-made, prototype, or special tools, dies, jigs, fixtures and gauges within specific dimensions. Duties may include laying out work pieces, performing mathematical computations, assembling and positioning work pieces and machines, operating machine-tools, reading mechanical drawings, heat treating parts, hand-fitting, and finishing work to specifications.

Requirements

While this occupation is a designated trade in Nova Scotia, all of the apprenticeship training takes place on-the-job. At the appropriate time, a journeyman/woman's examination is administered.

Training Paths

For detailed information on machinist apprenticeship training, see Machinist Occupations. After this program has been completed, the individual can then seek employment with a company that uses tool and die makers. Further training in this specialty area will then be provided on-the-job under the supervision and instruction of more experienced employees.

Skills/Aptitudes

Individuals in this occupation should have an interest in working with machines, precise techniques, and processes. There may be exposure to heat, noise, vibration, dust, and odours within the working environment. Manual dexterity is necessary as is the ability to perform mathematical functions.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **60**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$33,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

WATCH AND CLOCK REPAIRERS

Nature of the Work
This occupational group is concerned with repairing, cleaning and adjusting watches, clocks and mechanical movements used in clockwork-operated devices, such as timers, meters and recorders.

Requirements
There are no formal training or certification requirements for entrance into this occupation.

Training Paths
Individuals entering this occupation typically receive training on-the-job. In some cases, employees may require knowledge of electronics.

Skills/Aptitudes
Individuals interested in this occupation should enjoy working with intricate mechanical and electronic parts.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **80**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential
- Estimated average annual earnings in 1989: **$24,000**

FOR FURTHER INFORMATION CONTACT:

A local watch and clock repairer

WELDERS

Nature of the Work
This occupational group is concerned with joining, surfacing, cutting, or otherwise fabricating and repairing ferrous and non-ferrous metal parts and structures using welding and cutting equipment.

Requirements
This occupation is a designated trade in Nova Scotia, however, certification is not compulsory. Completion of a welding course is highly recommended.

Training Paths
There are several entry paths into this occupation. Individuals may receive basic training through a two-year program offered at several campuses of the Nova Scotia Community College. Individuals may also seek employment directly with an employer and receive on-the-job training. As a third alternative, a one-year program is offered at the Cape Breton and Dartmouth Adult Vocational Training Campuses of the Nova Scotia Community College. Typically, individuals in this trade will have completed the tenth grade or its equivalent.

Skills/Aptitudes
Individuals in this trade should enjoy working with their hands, possess good eye and hand co-ordination and physical strength, and be able to concentrate over extended periods of time. The ability to perform mathematical computations is helpful.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **2,050**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **100**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **significantly above average**

Earnings Potential
- Estimated average annual earnings in 1989: **$28,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

Clerical Occupations

CLERICAL OCCUPATIONS, GENERAL

Most Significant Occupations in this Group

CCDO#	Title
4131	Bookkeepers and Accounting Clerks
4197	General Office Clerks
4155	Stock Clerks and Related Occupations
4171	Receptionists and Information Clerks
4199	Other Clerical and Related Occupations, N.E.C.

Nature of the Work

This group involves occupations, not elsewhere classified, concerned with performing duties of a clerical nature. Activities may include bookkeeping; accounting; classifying and recording information; transferring data into accounts and records; paying and receiving money; examining orders for goods and services; making appointments; and receiving clients and customers.

Requirements

Individuals considering a career in these occupations are generally required to have received training in areas such as bookkeeping and office procedures. Typing skills are also an asset.

Training Paths

Programs and short courses in bookkeeping, general business and accounting/bookkeeping are available at several of the campuses of the Nova Scotia Community College and at private trade schools in the Province. These courses may vary in length from six months to two years. The eleventh grade or its equivalent is generally required for admission. Some occupations within this group, however, require no additional education beyond high school and training is provided on-the-job.

Skills/Aptitudes

Individuals in these occupations should have an aptitude for working with numbers and/or handling cash, have the ability to perform repetitive tasks, and be knowledgeable of computers and other automated office machinery. They should also be co-operative and able to work as part of a team.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **32,830**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **3,370**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$22,000**

CLERICAL OCCUPATIONS, TYPING SPECIALTY

Most Significant Occupations in this Group

CCDO#	Title
4111	Secretaries and Stenographers
4113	Typists and Clerk Typists
4110	Supervisors, Stenographic and Typing Occupations

Nature of the Work

This occupational group performs various administrative details; co-ordinates and maintains effective office procedures and efficient work flow; establishes and maintains harmonious working relationships with supervisors, co-workers and subordinates, customers or clients and suppliers. Activities may include scheduling appointments and maintaining a calendar; answering telephone calls; recording minutes, transcribing from machines, shorthand, or rough copying; answering correspondence; ordering office supplies, maintaining files and record management systems; maintaining budgets, expense accounts and financial records. Individuals may be involved in hiring and supervising other employees and co-ordinating their activities. These occupations can produce musculoskeletal strain due to sitting for long periods of time as well as eye strain from video display terminals, and stress.

Requirements

Individuals entering these occupations are generally required to have received formal secretarial training including training in business English, typing, accounting and office procedures.

Training Paths

There are numerous training programs and short courses offered in Nova Scotia through private trade schools, local Canada Employment Centres, and the Nova Scotia Community College. These courses are listed under a variety of names, such as clerk typist, data processing, stenography, secretarial, word processing, legal secretarial, and business education. These can vary in length from a few weeks to two years depending on the number of topics covered and the certification offered. The emphasis in many cases will be on the use of computers in word processing and office automation. Completion of the tenth grade is generally required for entry. Additionally, there is a three-year Bachelor's degree program in Office Administration offered at Mount Saint Vincent University in Halifax and a three-year Bachelor's degree program in Secretarial Science at the University College of Cape Breton in Sydney. Generally, completion of the twelfth grade is required for admission into these programs. Mount Saint Vincent University also offers diploma programs in office administration.

Skills/Aptitudes

The necessary skills required include an accurate and fast typing speed; grammar, composition and communication skills; and a working knowledge of computers, word processing software and general office equipment.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **12,250**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **970**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$20,000**

FOR FURTHER INFORMATION CONTACT:

Professional Secretaries International,
Halifax-Dartmouth Chapter
P.O. Box 792, Station M
Halifax, Nova Scotia
B3J 2V2

N01

Sport-Related Occupations

SPORT-RELATED OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
3370	Coaches, Sport and Recreation
3379	Occupations in Sport and Recreation, N.E.C.
3373	Athletes
3371	Referees and Related Officials
3360	Supervisor, Sports and Recreation

Nature of the Work

This occupational group is concerned with administering and directing provincial sport and/or recreation programs; or, on a part-time basis, managing, coaching, refereeing, training and instructing athletes for team sports, both competitive and recreational. Activities may include negotiating contracts and sponsorships with players, advertising, and arranging involvement in sports events.

Requirements

While there are no formal requirements for individuals in these occupations, several years of working experience combined with a university degree in the field is strongly recommended.

Training Paths

Individuals interested in obtaining an administrative position in these occupations should obtain a Bachelor's degree in either Physical Education or Recreation. These programs are offered at several universities throughout the Province. The programs are three to four years in length and require successful completion of the twelfth grade or its equivalent is required for entry. There are also six courses in Arena Management leading to a certificate if all courses are obtained at Saint Mary's University in Halifax. Coaches and instructors must have an exceptional knowledge of their sport which is usually gained through years of experience as a participant.

Skills/Aptitudes

Skills required for success in these occupations include determination, perseverance, courage, and self-confidence. Also important is the ability to motivate and encourage others to perform to the best of their abilities. Communication skills, both verbal and written, are essential for teaching and instructing others. A knowledge of non-profit and volunteer sectors is helpful.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,100**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **80**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$27,000**

FOR FURTHER INFORMATION CONTACT:

Sport Nova Scotia
P.O. Box 3010
Halifax, Nova Scotia
B3J 3G6

Architectural/ Engineering/ Electronic/ Electrical Technicians and Technologists

ARCHITECTURAL AND ENGINEERING TECHNICIANS AND TECHNOLOGISTS

Most Significant Occupations in this Group

CCDO#	Title
2165	Architectural and Engineering Technicians and Technologists
2160	Supervisors, Other Occupations in Architecture and Engineering

Nature of the Work

The occupations within this group are involved in carrying out technological and technical functions in an engineering or architectural specialization using a knowledge of architectural, engineering, scientific, mathematical, and drafting design principles and practices. Activities may include technological functions, such as support in research, design, and development; and technical functions, such as support in installation, operation, maintenance, production, and control. Most technicians and technologists work regular hours in offices, laboratories, electronics shops, or industrial plants. Some engineering positions may involve exposure to electrical shock hazards from equipment.

Requirements

Individuals in these occupations are generally required to have an Architectural or Engineering Technician or Technology diploma from a recognized institute. Certification for engineering technicians and technologists, although not mandatory, is becoming important as employers are increasingly requiring it. The Society of Certified Engineering Technologists and Technicians should be contacted for further information on those occupations. There is no related society in Nova Scotia for architectural technicians and technologists.

Training Paths

There is no training for architectural technicians or technologists in Nova Scotia. There are, however, three diploma programs offered in engineering technology. The University College of Cape Breton offers three-year programs in Engineering Technology and Environmental Technology, while the College of Geographic Sciences of the Nova Scotia Community College offers a thirty-six week program in Planning Technology. Each of these programs require completion of the twelfth grade with emphasis on chemistry, physics and mathematics for entry.

Skills/Aptitudes

Individuals in these occupations should possess a good mechanical aptitude and have an interest in discovering how things work. Effective oral and written communication skills are important. Individuals must be able to work well under pressure, and be able to collaborate and co-operate with others as they are often part of a team of engineers and/or architects.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,560**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **90**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$34,000**

FOR FURTHER INFORMATION CONTACT:

Society of Certified Engineering Technologists and
Technicians in Nova Scotia
P.O. Box 159
D.M.P.S.
Dartmouth, Nova Scotia
B2Y 3Y3

P00

ELECTRICAL TECHNICIANS AND TECHNOLOGISTS

Most Significant Occupations in this Group

CCDO#	Title
8533	Electrical and Related Equipment, Installing and Repairing Occupations, N.E.C.
9531	Power Station Operators

Nature of the Work

This occupational group includes occupations, not elsewhere classified, concerned with installing and repairing electrical equipment such as domestic appliances, industrial machinery, transport vehicles, aircraft and ships. Activities may include mounting and connecting equipment to power sources, analyzing faults with test instruments, disassembling and replacing defective parts and internal wiring, and reassembling and testing operation of equipment. Most technicians and technologists work regular hours in offices, laboratories, electronics shops, or industrial plants. Some electrical positions may involve exposure to electrical shock hazards from equipment.

Requirements

There are a number of occupations within this group, one of which is industrial electrician. This is a designated apprenticeable trade. While certification is not compulsory, many employers require that their employees be registered apprentices or holders of Certificates of Qualification. For other occupations in this group, it is recommended that the individual complete an electrical repair course.

Training Paths

There are two entry paths into the occupation of industrial electrician. Individuals may receive basic training through a two-year program offered at several campuses of the Nova Scotia Community College or they may seek employment directly with an employer and proceed through the block release program. The term of apprenticeship is four years. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Additionally, there is a two-year Appliance Repair program offered at the Dartmouth Adult Vocational Training Campus and a two-year Refrigeration and Air Conditioning Repair course offered at the Halifax Campus and the Cape Breton Adult Vocational Training Campus of the Nova Scotia Community College as well as the Colchester Regional Vocational School. Typically, individuals in this trade will have completed the eleventh grade or its equivalent.

Skills/Aptitudes

Individuals in the occupation of industrial electrician should have the ability to apply knowledge of electrical theory, to understand and follow technical instructions, and diagnose equipment malfunctions based on test results and other data.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,890**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **140**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

ELECTRONIC TECHNICIANS AND TECHNOLOGISTS

Most Significant Occupations in this Group

CCDO#	Title
8735	Wire Communications and Related Equipment Installing and Repairing Occupations
8535	Electronic and Related Equipment Installing and Repairing Occupations, N.E.C.
8537	Radio and Television Repairers
9551	Radio and Television Broadcasting Equipment Operators

Nature of the Work

This group involves occupations related to the electronics industry concerned with carrying out various technical and technological functions. Activities may include operating, installing and repairing radio and television transmitters; business and commercial machines; scientific, engineering, optical and medical instruments and apparatus; and photographical, meteorological and similar equipment. Most technicians and technologists work regular hours in offices, laboratories, electronics shops, or industrial plants. Some electronics positions may involve exposure to electrical shock hazards from equipment.

Requirements

Individuals in these occupations are generally required to possess a certificate or diploma in Electronics from a recognized institute. While certification is not mandatory, employers are increasingly demanding it as part of their employment requirements.

Training Paths

Courses in Electronics Technology are available through a two-year program at the Institute of Technology, in Halifax, of the Nova Scotia Community College and a three-year program at the University College of Cape Breton in Sydney. A second option is a twelve-month program offered at the Adult Vocational Training Campuses of the Nova Scotia Community College in Cape Breton and Dartmouth. In addition, two-year Electronics programs are also offered at several of the Community College campuses. As a final option, a two-year Marine Electronics program is offered at Burridge Campus. Completion of the eleventh or twelfth grade or its equivalent with a strong standing in mathematics and physics is generally specified as a prerequisite for acceptance into these programs.

Skills/Aptitudes

Individuals are required to have the ability to understand principles of electronics and mechanical operations. They are required to perform intricate work with their hands and must have good motor skills and manual dexterity. Individuals must be able to collaborate and co-operate with others as they will often be involved in teamwork.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,690**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **160**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$33,000**

FOR FURTHER INFORMATION CONTACT:

Society of Certified Engineering Technologists and
Technicians in Nova Scotia
P.O. Box 601
Halifax, Nova Scotia
B3J 2R7

P01

PRECISION INSTRUMENT MECHANICS AND REPAIRERS

Nature of the Work

This occupational group is involved in installing and repairing engineering, scientific, and medical instruments and apparatus, and photographical, meteorological and similar equipment.

Requirements

Training for this occupation is provided under the apprenticeable trade of industrial instrumentation. Certification is not compulsory; however, many employers require that their employees be registered apprentices or holders of Certificates of Qualification.

Training Paths

There are two entry paths into the industrial instrumentation occupation. Individuals may receive basic training through a two-year program offered at several campuses of the Nova Scotia Community College or they may seek employment directly with an employer and proceed through the block release program. Individuals obtaining employment in this trade should register with the Apprenticeship Section of the Department of Advanced Education and Job Training in order that they may receive credit for their training and experience. Typically, individuals in this trade will have completed the eleventh grade or its equivalent with strong standing in physics and mathematics. The term of apprenticeship is four years.

Skills/Aptitudes

Individuals are required to have the ability to understand principles of electronics and mechanical operations. They are required to perform intricate work with their hands and must have good motor skills and manual dexterity.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **220**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$34,000**

FOR FURTHER INFORMATION CONTACT:

Industrial Training Services
Apprenticeship Section
Department of Advanced Education and Job Training
P.O. Box 2086, Station M
Halifax, Nova Scotia
B3J 3B7

P03

Professional Sales Occupations

PROFESSIONAL SALES OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
1137	Sales and Advertising Management Occupations
5130	Supervisors, Sales Occupations, Commodities
5133	Commercial Travellers
5171	Insurance Sales Occupations and Agents
5172	Real Estate Sales Occupations

Nature of the Work

This occupational group includes a wide variety of occupations, not elsewhere classified, concerned with professional sales activities. Duties may include selling commodities and services such as real estate, insurance, business services, or technical equipment; conducting wholesale or retail businesses; and supervising and co-ordinating the activities of workers directly or indirectly involved in sales occupations. Some occupations in this group necessarily involve a considerable amount of time in travel. Weekend and evening work may be required to meet the needs of customers.

Requirements

Specific entrance requirements exist for only some of the occupations in this group and depend on the type of product or service being sold.

Training Paths

Due to the wide diversity of products and services covered by these occupations, the number of training paths varies greatly. For example, real estate sales and insurance sales require compulsory licensing by the Nova Scotia Consumer Services Bureau under the Department of Consumer Affairs in Halifax. Licenses are granted after successful completion of the pre-licensing course from either the Nova Scotia Real Estate Association or the Insurance Institute of Canada. The courses must be sponsored by a potential employer. Securities salespersons must be licensed by the Nova Scotia Securities Commission. To be licensed individuals must be employed full time and have completed a home study course administered by the Canadian Securities Institute in Toronto.

Other sales positions may require a technical knowledge of the product or service which may be gained through the Nova Scotia Community College. The Dartmouth Adult Vocational Training Centre Campus of the Nova Scotia Community College offers a three-month program entitled Retail Selling and a five-month program entitled Sales Representation and Marketing. All referrals for these courses must be made through the local Canada Employment Centre.

Other sales positions may require a broad business background which may be obtained through either a commerce or business administration degree. Training for some sales positions, such as car salesperson, can be obtained on-the-job.

Skills/Aptitudes

Individuals in these occupations should have excellent interpersonal and communication skills, and be energetic and enthusiastic. They should always be alert to the customer's needs and be as helpful and efficient as possible.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **20,040**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **1,390**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

Arts and Crafts Occupations

MUSICIANS AND RELATED OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
3331	Music Composers
3332	Musicians
3333	Occupations in Music, N.E.C.

Nature of the Work

This occupational group is involved in playing musical instruments in orchestras, bands, chamber music ensembles, solo recitals, and jazz groups; singing as a soloist or member of a vocal group; composing, adapting, arranging, or copying music; and conducting instrumental or vocal performances. Musicians generally perform at night and on weekends, and also spend a considerable amount of time in rehearsal and practice. Many musicians often hold other jobs to supplement their income.

Requirements

While there are no formal requirements for entrance into these occupations, a high degree of talent and a university degree is strongly recommended. In order to perform in an establishment as a paid performer, one must be registered with the Atlantic Federation of Musicians. For acceptance into orchestras or bands, formal auditions are held, often on national and international levels.

Training Paths

There are two ways to receive training in these occupations. A Bachelor's degree in Music may be obtained from Dalhousie University, Halifax; Acadia University, Wolfville; and Saint Francis Xavier University, Antigonish, through a four-year program requiring completion of the twelfth grade or its equivalent for entrance. These programs emphasize both the theoretical and practical aspects of music. Saint Francis Xavier University also offers a two and one-half year diploma program in Music. Alternatively, individuals may take private lessons in voice or an instrument in order to obtain the necessary skill level. Pre-university training is essential; training on the piano in addition to a primary instrument is strongly recommended. The content and emphasis of private lessons is entirely up to the individual teacher and student. Examiners from the Royal Conservatory of Music visit many communities in the spring of each year to conduct testing for those students who wish to be graded on the skills learned. The Maritime Conservatory of Music also offers many courses where lessons may be obtained. Dalhousie University offers six courses leading to a certificate for those who wish to become music instructors. A Bachelor's degree in Music is required for entrance.

Skills/Aptitudes

The most essential qualities for a musician to possess are talent, dedication, and an ability to accept constructive criticism. Musicians must be willing to travel and put in long hours in practice and when performing. Technical and artistic skills are necessary for success. Abilities in tone production, sight reading and improvising are expected.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **540**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$18,000**

FOR FURTHER INFORMATION CONTACT:

Atlantic Federation of Musicians
6307 Chebucto Road
Halifax, Nova Scotia
B3L 1K9

or

Maritime Conservatory of Music
5820 Spring Garden Road
Halifax, Nova Scotia
B3H 3X8

R01

PAINTERS, SCULPTORS, AND ILLUSTRATING ARTISTS

Most Significant Occupations in this Group

CCDO#	Title
3314	Advertising and Illustrating Artists
3311	Painters, Sculptors and Related Artists

Nature of the Work

This group includes occupations in the fine arts and occupations which are commercial in nature. Painters, sculptors and related artists are involved in creating original artistic works, personally interpreted through painting, drawing, engraving, sculpturing, and etching. Advertising and illustrating artists, and graphic designers utilize art and technology to communicate ideas. By controlling colour, type, symbols, and photography, these individuals create and manage the production of images designed to inform and persuade a specific audience. They often collaborate with marketing researchers and public relations specialists to develop design alternatives. Activities may include creating illustrations, designs, cartoons and caricatures for various purposes related to advertising, instructing, and entertainment.

Requirements

There are a number of distinct occupations within this group. Courses to improve an individual's design and production skills would be an asset in gaining employment in the occupations which are commercial in nature.

Training Paths

For those who wish to receive formal training in any of these areas, a four-year university degree program in Fine Arts is available at the Nova Scotia College of Art and Design in Halifax. As there are no standard entrance requirements, interested applicants should consult the Art College for details. In addition, Mount Saint Vincent University in Halifax offers a three-year Bachelor of Arts program with a major in Fine Arts. Completion of the eleventh grade or its equivalent is required for admission into this program.

Skills/Aptitudes

A natural ability to draw, paint or sculpt is desirable, along with a good sense of creativity and imagination. The ability to visualize a finished piece of work from a sketch or brief description is also necessary. Computer skills, as well as design and production skills, are important for those occupations which are commercial in nature. Leadership skills may be an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **800**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **70**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$21,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia College of Art and Design
5163 Duke Street
Halifax, Nova Scotia
B3J 3J6

or

Society of Graphic Designers of Canada, Atlantic Chapter
P.O. Box 1533, Station M
Halifax, Nova Scotia
B3J 2Y3

PERFORMING AND AUDIOVISUAL ARTS AND RELATED OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
3330	Producers and Directors, Performing and Audiovisual Arts
3334	Choreographers and Dancers
3335	Acting Occupations
3337	Radio and Television Announcers
3339	Occupations in Performing and Audiovisual Arts, N.E.C.

Nature of the Work

This occupational group includes actors, dancers, choreographers, announcers, producers, directors, broadcasters, and researchers. Their work, generally intended for public consumption, occurs either on-stage or off-stage in television, radio, film or live performance. Acting requires patience and total commitment, since actors must wait for parts or filming schedules, work long hours, and travel frequently. Directors and producers often work under stress as they must try to meet schedules, stay within budgets, and resolve personnel problems.

Requirements

There are no formal requirements for entrance into these occupations; however, the chances of gaining employment increase with the amount of education and training obtained.

Training Paths

A wide range of courses and programs exist for the occupations in this group. Dalhousie University in Halifax offers three-year Bachelor's degrees in Theatre and Costume Studies. Acadia University in Wolfville offers a four-year degree in Theatre. These programs require completion of the twelfth grade with a high standing in English for entry. The Dance Department at the Maritime Conservatory of Music in Halifax offers training in ballet, creative movement, and jazz dance as well as ballroom and social dance. A variety of other programs exist in specialty areas of these occupations in schools, universities, theatres, and drama leagues throughout Canada. Other sources of information should be sought for more detail on these programs. Programs in radio and television broadcasting are offered throughout the Province. Kingstec in Kentville offers a two-year program requiring completion of the twelfth grade for entry and Memorial High School in Sydney Mines offers a two-year program requiring completion of the tenth grade for entry. The Atlantic Broadcasting Institute in Halifax also offers a six-month program in this area.

Skills/Aptitudes

Individuals in these occupations should enjoy acting and other forms of verbal expression. Creativity and imagination are also necessary. The ability to get along well with others and express ideas and thoughts clearly is required. Because most artists are independent contractors, some knowledge of business basics is also useful. These occupations may not always fit into a normal 9:00-5:00 routine.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **700**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **60**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$37,000**

FOR FURTHER INFORMATION CONTACT:

Alliance of Canadian Cinema
Television and Radio Artists (ACTRA)
5510 Spring Garden Road
Halifax, Nova Scotia
B3J 1G5

PRODUCT AND INTERIOR DESIGNERS

Nature of the Work

This occupational group includes individuals who create designs for industrial and commercial products as well as residential, retail, hospitality, and institutional interiors. Activities may include developing designs for manufactured products and window displays; designing sets for motion picture, television and stage productions; space planning; and architectural drafting for interior portions of the project. Designers frequently adjust their workday to suit their clients and meet with them evenings or on weekends when required.

Requirements

While there are no definite educational or certification requirements to work in these occupations, courses in drawing, drafting, or designing may be helpful in obtaining employment.

Training Paths

Training in the area of drawing and designing may be obtained from the Nova Scotia College of Art and Design in Halifax through their Fine Arts degree program. A degree program in Theatre Scenography is offered at Dalhousie University, also in Halifax. The minimum entrance requirement for these four-year courses is the completion of twelfth grade or its equivalent. Courses in graphic design are offered at the Annapolis and Cape Breton Campuses of the Nova Scotia Community College and at the Colchester Regional Vocational School. These courses are two years in length and generally require the completion of the tenth grade or its equivalent for entry. Also, the College of Geographic Sciences offers a three and one-half year diploma program in graphic design requiring completion of the twelfth grade for entry. While there are no courses in interior design available in Nova Scotia, there are colleges and technical institutes in Ontario which do have such programs.

Skills/Aptitudes

Individuals in these occupations should be creative, imaginative, artistic, have a good sense of colour and design, be able to visualize three-dimensional drawings, and must be able to work well with others. They must be able to communicate their ideas visually and be open to new ideas and influences.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **530**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Association of Interior Designers of Nova Scotia
Box 2042, Station M
Halifax, Nova Scotia
B3J 3B4

Protective Service and Other Highly Skilled Occupations

AIR PILOTS, FLIGHT OFFICERS, FLIGHT ENGINEERS

Nature of the Work

This occupational group is concerned with piloting and navigating fixed-wing airplanes and helicopters; directing the course of airplanes and helicopters; inspecting airplane systems and equipment before flight; tending to instrument gauges and controls during flight; and conducting in-flight adjustments and repairs. Flight engineers monitor functioning of aircraft during flight and may assist in flying aircraft. Individuals in these occupations often have irregular hours including evenings and weekends.

Requirements

The minimum requirement for airline pilots is a Canadian Commercial Pilot's License with night endorsement; an Airline Transport Rating, complete with a Class 1 Instrument Rating and 2,000 flying hours; and a Canadian Radio Telephone License. Each pilot must also have a valid Transport Canada medical certificate, which is renewed regularly.

Training Paths

While there is no training available for these occupations in Nova Scotia, two- and three-year programs in aviation technology are offered at colleges in Central and Western Canada. Completion of the twelfth grade or its equivalent with good standing in mathematics and science is generally required for entry. Upon completion, students should possess a Commercial License, Multi-Engine Endorsement, and a current Instrument Flight Rating. Although it is a more expensive route, students may obtain their Commercial License through instruction given at private flying clubs or training schools. Universal Helicopters Newfoundland Limited provides flight training for commercial, private, instrument, night, and pilot proficiency in Goose Bay, Labrador. Individuals must be eighteen years of age and pass a medical examination.

The Canadian Armed Forces also has a seven-month pilot training program. Candidates must hold a university degree and meet height and medical standards.

Skills/Aptitudes

Individuals in these occupations should have a well-balanced personality, self-confidence, a strong sense of responsibility, leadership and initiative. Good communication skills, both oral and written, are essential. Individuals should possess manual dexterity, a mechanical aptitude and must have excellent physical and mental health. High school students interested in flying can gain valuable experience by joining the Air Cadets in their area.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **180**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$60,000**

FOR FURTHER INFORMATION CONTACT:

Air Canada
Personnel Office
Suite 500
5251 Duke Street
Duke Tower
Halifax, Nova Scotia
B3J 1P4

or

Canadian Airlines International
Personnel Office
P.O. Box 178
Elmsdale, Nova Scotia
B0N 1M0

or

Universal Helicopters
Newfoundland Limited
P.O. Box 9025, Station B
St. John's, Newfoundland
A1A 2X3

S22

AIR TRANSPORT SUPPORT OCCUPATIONS

Nature of the Work

This occupational group is concerned with providing direct ground support to air transport operations. Activities may include controlling air traffic during take off, landing and flight; communicating with aircraft by radiotelegraph and radiotelephone; and operating navigational aids.

Requirements

There are a number of occupations within this group, one of which is air traffic controller. An Air Traffic Controller's License must be obtained from Transport Canada in order to work in this occupation. Also in this group is the occupation of flight service specialist, where again Transport Canada is the authorizing agency.

Training Paths

Students interested in the occupations of air traffic control or flight service specialist must apply to Transport Canada for training. Candidates undergo a number of tests, an interview, and medical, eye, and security exams. If a candidate successfully completes the above, he/she is able to attend the Federal Training Institute in Cornwall, Ontario. This involves on-the-job training as well as classroom theory. The training program for an air traffic controller usually lasts eighteen to twenty-four months while the training for a flight service specialist is usually twelve to eighteen months. Training for the other occupations in this group is provided by an employer through on-the-job training.

Skills/Aptitudes

Applicants should be eighteen years of age or older with a twelfth grade education including courses in mathematics and physics. Experience in public speaking is an asset. Since directions to pilots must be given quickly and clearly, individuals must be articulate. Good health and eyesight are required.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **180**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$37,000**

FOR FURTHER INFORMATION CONTACT:

Regional Staffing Office
Transport Canada
P.O. Box 42
Moncton, New Brunswick
E1C 8K6

COMPUTER PROGRAMMERS AND SYSTEMS ANALYSTS

Nature of the Work

This occupational group is concerned with writing computer programs to manipulate or organize large volumes of information; planning, implementing and supervising computer processing services; maintaining existing systems; responding to system failures; and adapting computer software packages for specific applications. These individuals usually work regular hours; however, they may work extra hours to meet deadlines. Typically, individuals will get involved in systems analysis after gaining experience in programming. A considerable amount of business and application knowledge is normally a prerequisite for an analyst's position.

Requirements

Individuals in these occupations are generally required to have a diploma in Computer Programming, Computer Graphics, or Computer Science Technology; or a university degree in Computer Science.

Training Paths

In Nova Scotia, a one-year diploma program is offered at the College of Geographic Sciences of the Nova Scotia Community College, in both Computer Graphics and Scientific Applications Programming. Four-year Bachelor of Computer Science programs are offered at Acadia University in Wolfville and the Technical University of Nova Scotia in Halifax. Saint Mary's University and Dalhousie University in Halifax, and Saint Francis Xavier University in Antigonish, offer a four-year Bachelor of Science degree program with a major in Computer Science. A forty-eight week Business Computer Programming diploma program and a forty-week diploma program in Computer Technology are offered at the Institute of Technology, in Halifax, of the Nova Scotia Community College. Engineering firms may require a Bachelor's degree in Engineering. Entrance requirements for each of these institutions include completion of the twelfth grade or its equivalent with good standing in mathematics and science.

Skills/Aptitudes

Computer programmers and systems analysts should have a sense for precision and detail; possess good methodical, analytical and organizational skills; and be able to communicate well both orally and in writing.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,650**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **110**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$35,000**

FOR FURTHER INFORMATION CONTACT:

Larry Sampson
Bluenose Section of the Canadian Information Processing Society
c/o Maritime Telephone and Telegraph
P.O. Box 880
Halifax, Nova Scotia
B3J 2W3

S08

DRAFTING OCCUPATIONS

Nature of the Work

This occupational group is concerned with preparing drawings from designer's diagrams and specifications to be used for machine manufacturing or for constructing buildings, dams, roads and other civil engineering projects. Activities include drafting topographical, economic, nautical and other maps and charts; illustrating technical manuals dealing with assembly, installation, operation, maintenance and repair of machinery and other equipment; and duplicating plans and drawings. Drafting often involves the use of computer-assisted drafting (CAD) equipment.

Requirements

While there are no formal requirements for individuals working in this occupation, completion of a drafting program is strongly recommended.

Training Paths

Individuals entering this occupation may receive their training through a one- or two-year drafting course offered at several campuses of the Nova Scotia Community College. The entrance requirements for these courses is generally the eleventh grade.

Skills/Aptitudes

To enter into this occupation, individuals should have a talent to draw and sketch; a desire for accuracy and efficiency; and be neat and systematic in their approach to projects. Computer skills are usually required.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,040**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

ELECTRONIC DATA PROCESSING EQUIPMENT OPERATORS

Nature of the Work

This occupational group is primarily concerned with operating electronic data processing equipment for recording, storing, categorizing, positioning, and computing data; extracting, comparing and reporting information; and making duplicates. Individuals may also be involved in operating electronic electromechanical machines that record, store, process and transfer data to and from magnetic disks, tapes, or other sources.

Requirements

Individuals in these occupations must have a good background in computers.

Training Paths

The two major occupations in this group are data-entry clerk and electronic data processing operator. Data-entry clerks must be able to type at a fast rate. There are numerous training programs for typists throughout the Province, varying in length from a few weeks to two years. Individuals should contact the Nova Scotia Department of Advanced Education and Job Training or a local County School Board for further information regarding the length and location of the nearest typing programs. Electronic data processing operators may receive their training through a Data Processing Technology program which is offered at four of the Province's Community College campuses. The programs range from one to three years in length and generally require completion of the eleventh grade for entry. The Institute of Technology in Halifax offers a forty-eight-week program in Business Computer Programming and a forty-week program in Computer Technology, both requiring completion of the twelfth grade or its equivalent for entry. The University College of Cape Breton in Sydney offers a three-year program in Data Processing, also requiring completion of the twelfth grade for admission. Individuals may also receive a knowledgeable background in this area through on-the-job training.

Skills/Aptitudes

Individuals in these occupations must enjoy working with computers. They should also possess good analytical ability and dexterity with their hands. Typing skills are necessary for the clerical occupations in this group.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,610**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **330**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$22,000**

FOR FURTHER INFORMATION CONTACT:

Association for Computing Machinery
c/o INRS Telecommunications
3 Place du commerce
Verdun, Quebec
H3E 1H6

FUNERAL DIRECTORS AND EMBALMERS

Nature of the Work

This occupational group is involved in arranging and directing funerals and preparing bodies for burial. Responsibilities of funeral directors include: organizing the removal of the body to the mortuary; obtaining data on deceased through family or other authorized persons; filing appropriate reports; helping to choose a casket, and type of funeral; and handling publication of death notices. The duties of embalmers include washing the corpse, draining blood from the body and replacing it with embalming fluid, and applying cosmetics.

Requirements

Registration and licensing by the Board of Registration of Embalmers and Funeral Directors is compulsory to work in these occupations.

Training Paths

To become an embalmer in Nova Scotia, an individual must have completed a minimum of the eleventh grade or its equivalent and a two-year on-the-job training program under the supervision of a licensed embalmer. In order to become a funeral director the individual must complete a six-month training period under a licensed funeral director and pass a written examination. Embalmers and funeral directors' manuals are sold at the Nova Scotia Department of Consumer Affairs.

Skills/Aptitudes

Funeral directors and embalmers should feel comfortable working with the deceased and should be able to comfort people in times of distress. Funeral directors are often called in the middle of the night and must show consideration and tact at all times.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **270**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Board of Registration for
Embalmers and Funeral Directors
c/o Nova Scotia Department of Consumer Affairs
P.O. Box 998
Halifax, Nova Scotia
B3J 2X3

LIBRARY AND MUSEUM TECHNICIANS/ SUPERVISORS

Nature of the Work

This occupational group is concerned with activities involved in the library, museum and archival sciences. Library technicians assist in ordering, cataloguing, processing, maintaining, circulating and promoting collections of library materials; provide information and advisory services to readers; and, in public schools, participate in library programming. Technicians may also organize and supervise the work of library clerical staff. Museum catalogers are involved in compiling information on items in a museum or gallery collection and may also be involved in supervising and organizing the activities of other workers. Individuals in these occupations usually work regular hours.

Requirements

Employers' educational requirements vary. They generally require completion of the twelfth grade with either successful completion of a library technician program, a Bachelor's degree, or several years satisfactory library work experience.

Training Paths

A two-year Library Technician program is offered at Kingstec and the Halifax Campus of the Nova Scotia Community College. Completion of the twelfth grade is required for entry. Individuals interested in museum cataloguing or other museum-related occupations may follow one of two routes in Nova Scotia. The University College of Cape Breton in Sydney offers a Bachelor of Arts with a major in Museum Studies. The entrance requirement to this three-year program is completion of the twelfth grade or its equivalent. An alternate route is to obtain employment directly with an employer. Formal training or museum experience is often desirable. One introductory class in Museum Studies is available at Mount Saint Vincent University in Halifax involving three hours of class time per week for one academic year, and includes occasional field work. As this class would not necessarily provide the needed background, it is recommended that interested individuals volunteer at their local museum or gallery in order to gain experience.

Skills/Aptitudes

Individuals in these occupations must be able to work independently with library or museum users, co-operate with other staff, and supervise clerical staff. Good communication skills, both verbal and written, are essential. Facility with microcomputer and audio-visual equipment may be required. A knowledge of literature is also an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **90**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$25,000**

FOR FURTHER INFORMATION CONTACT:

President,
Nova Scotia Library Association
5381 Spring Garden Road
Halifax, Nova Scotia
B3J 1E9

LIFE SCIENCES TECHNICIANS AND TECHNOLOGISTS

Nature of the Work

This occupational group is concerned with carrying out technological and technical functions in a life sciences specialization such as forestry, botany, zoology, horticulture or agriculture, using a knowledge of scientific and mathematical principles and laboratory practices. Individuals in these occupations may be involved in providing technical assistance to a researcher in the life sciences. Life sciences technicians and technologists usually work regular hours; however, irregular hours may be required to follow through on an experiment or field work.

Requirements

Individuals in these occupations have at least completed an appropriate community college program or a university Bachelor's degree.

Training Paths

Depending on the area of interest to the individual, training may be taken at one of the campuses of the Nova Scotia Community College or at one of several universities which offer Bachelor's degrees in Science. Programs at the Community College are generally one to two years in length and require completion of the twelfth grade or its equivalent for entry. University programs are three to four years in length and also have a minimum entrance requirement of twelfth grade. The Maritime Forest Ranger School in Fredericton offers programs in Forest Botany, Forestry, and Silviculture.

Skills/Aptitudes

Individuals working in these occupations should have a scientific aptitude and enjoy technical work. They must be able to work independently and as a member of a team while performing precise, analytical tasks. Familiarity with computers is required for some positions.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **640**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$32,000**

FOR FURTHER INFORMATION CONTACT:

Manager, Employment Office
National Research Council of Canada
Building M-58
Montreal Road
Ottawa, Ontario
K1A 0R6

MOTION PICTURE PROJECTIONISTS

Nature of the Work

This occupational group is concerned with operating motion picture projection and related equipment (35mm and 70mm) in theatres or similar establishments to produce co-ordinated motion picture entertainment. Activities include repairing breaks in film using a film splicer, cleaning lenses, oiling equipment and making minor repairs and adjustments. These individuals may operate a slide projector or stage spotlight if required.

Requirements

The Theatres and Amusements Act states that individuals must hold a license to operate a cinematograph. To obtain a license, an individual must either serve as an apprentice to a licensed operator for a period of not less than 400 hours, have been licensed as an operator in another province or country, or have passed such written and other examinations as the Board may prescribe, and must be at least eighteen years of age.

Training Paths

Training for this occupation in Nova Scotia is received on-the-job under the supervision of a more experienced employee who holds a license. Four hundred hours of training must be logged. The candidate will then write an examination provided by the Board and will be asked to demonstrate proficiency in a projection booth.

Skills/Aptitudes

For individuals in this occupation, an interest in film and movies is an asset. The ability to make minor repairs to the projector and repair breaks in the film is also required. Good eyesight, colour vision, artistic ability, and manual dexterity are important.

The projectionist occupation is going through technological changes. Individuals must be prepared to increase knowledge with respect to computerization and satellite communications.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **100**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

FOR FURTHER INFORMATION CONTACT:

Motion Picture Theater
Association of Canada
c/o Theatre Agencies Limited
522-11th Avenue
Calgary, Alberta
T2R 0C8

or

Amusements Regulation Division
Department of Consumer Affairs
P.O. Box 607
Halifax, Nova Scotia
B3J 2R7

OCCUPATIONS IN LAW, N.E.C.

Nature of the Work
This occupational group includes occupations involved in the application of legal principles to assist members of legal professions and to act as officers of courts of law. Activities include representing clients looking for patent application or trademark registration, handling routine legal and administrative duties under the supervision of a lawyer, searching public records, and procuring documents required to clear land titles.

Requirements
There are no formal entrance requirements for individuals in these occupations.

Training Paths
The only educational training available in these occupations is at the University College of Cape Breton in Sydney through the Business Technology program with a concentration in Paralegal Technology. This is a three-year program requiring completion of the twelfth grade for admission. In many of these occupations training is done on-the-job by the employer.

Skills/Aptitudes
Individuals in these occupations should have an interest in the legal profession and possess excellent oral and written communication skills. The ability to comprehend and follow instructions is important. Good interpersonal skills and tact are definite assets in dealing with clients.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **250**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential
- Estimated average annual earnings in 1989: **$28,000**

OCCUPATIONS IN RELIGION

Nature of the Work

This occupational group is primarily concerned with ministering to the spiritual needs of a congregation or community of a religious faith through the provision of motivation, leadership, religious training and guidance. Responsibilities may include preparing and conducting services of public worship, administering sacraments, supervising and conducting religious teaching, and performing other related functions. This group also includes nuns and brothers of religious orders. Graduates of programs in religion have entered into many diversified fields such as teaching, management, the ministry, social work, counselling and historical research. Individuals in these occupations may work long and irregular hours in administrative, educational and community service activities.

Requirements

Employment in these occupations usually requires a Bachelor's degree in Arts, Theology, or Religious Studies, plus the completion of a Master's degree in Theology, Divinity or Religious Studies.

Training Paths

Three- and four-year Bachelor programs are available at five universities in the Province, the minimum entrance requirement being completion of the twelfth grade or its equivalent. Master's programs are available at Acadia University in Wolfville and at the Atlantic School of Theology in Halifax. These programs are either two or three years in length and require a Bachelor's degree for entrance.

Skills/Aptitudes

Individuals should be mature, self-disciplined, sensitive to the needs of others, and have a keen interest in serving people. Oral and written communication skills plus good organizational abilities are necessary.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,160**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$21,000**

FOR FURTHER INFORMATION CONTACT:

Canadian Association for Pastoral Education
P.O. Box 96
Roxboro, Quebec
H8Y 3E8

OCCUPATIONS IN WELFARE AND COMMUNITY SERVICE

Nature of the Work

This occupational group is concerned with providing social services to individuals, families and groups, and with providing assistance to professional social workers. Duties may include planning and supervising recreational, social and cultural activities in youth or family camps, community centres, playgrounds and other settings, and caring for residents of half-way houses, group homes and similar establishments. Some evening and weekend work may be necessary. The work, while satisfying, can be emotionally draining. Turnover is reported to be high, especially among workers without academic preparation in this field.

Requirements

A university degree is usually considered to be the minimum requirement necessary for employment in these occupations.

Training Paths

The type of training will depend on the area of interest. If the individual wishes to work as either a recreation director or leader, then a four-year Bachelor of Recreation degree would be more appropriate. A four-year degree in recreation is offered at Acadia University in Wolfville and Dalhousie University in Halifax. For those interested in working with children, a four-year Bachelor of Child Studies is available at Mount Saint Vincent University in Halifax. The Nova Scotia Teacher's College also offers a two-year program in Child Development Services. Each of the above programs require completion of the twelfth grade for entry. Mount Saint Vincent University offers a one-year program in Gerontology which requires completion at least one year of university study for entry. For those wishing to work as a social worker assistant, a community services certificate course is available through the Department of Social Services and is taught at the Institute of Technology, in Halifax, of the Nova Scotia Community College. This is a ten-month program and is available to those with completion of the twelfth grade or its equivalent plus two years of related work experience. The University College of Cape Breton offers a three-year Bachelor of Community Studies requiring completion of the twelfth grade for admission.

Skills/Aptitudes

Individuals in these occupations tend to be outgoing, energetic and good listeners. The ability to communicate well with others is essential. An interest in helping others on a one-to-one basis or through a group situation is required as well as a strong sense of responsibility.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,660**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **90**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$23,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Family and Child Welfare Association
Suite 602
5121 Sackville Street
Halifax, Nova Scotia
B3J 1K1

S09

OCCUPATIONS IN WRITING

Most Significant Occupations in this Group

CCDO#	Title
3351	Writers and Editors, Publications
3353	Writers and Editors, Radio, Television, Theatre, Motion Picture
3359	Occupations in Writing, N.E.C.

Nature of the Work

This occupational group is concerned with writing and editing scripts for motion pictures, stage presentations, advertising, and broadcast programs; writing and editing activities for newspapers, magazines and books; and selecting, interpreting and editing news and other materials for information or entertainment through radio or television broadcasting. Some individuals in these occupations work regular hours; however, others work irregular hours including evenings and weekends depending on the type of employment. Many writers work on a freelance basis.

Requirements

Individuals in these occupations are not always required to possess a specific level of education, although a journalism or liberal arts degree is usually recommended.

Training Paths

Training in the area of journalism is provided at Kings College in Halifax through a Bachelor of Journalism program. This one-year program requires the completion of a three-year Bachelor of Arts program for entrance. A Bachelor of Arts degree with a major in English is offered at most universities throughout the Province. Mount Saint Vincent University offers a four-year Bachelor's degree in Public Relations, the only degree of its kind in Canada. All of these programs are either three or four years in length and the minimum entrance requirement is completion of the twelfth grade or its equivalent.

Skills/Aptitudes

Individuals in these occupations should possess good typing/word processing skills, excellent writing skills, resourcefulness and creativity. A critical mind and good organizational ability are also necessary. Editors must be tactful and able to guide and encourage others in their work.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **950**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$32,000**

FOR FURTHER INFORMATION CONTACT:

Writers' Federation of Nova Scotia
Suite 203
5516 Spring Garden Road
Halifax, Nova Scotia
B3J 1G6

PHOTOGRAPHIC AND RELATED OCCUPATIONS

Nature of the Work

This occupational group is concerned with photographing people, events, scenes, objects and products with still, motion-picture and television cameras. Activities include applying artistic and special effects; preparing and arranging subject matter; and planning and setting up special photographic equipment. Individuals may be involved in recording and reproducing video and audio images for radio and television broadcasting, motion-picture, tape, and phonograph record production. Working conditions for these occupations vary considerably from regular hours in comfortable, well-lighted offices to irregular hours doing field work, or photographing natural disasters or military conflicts.

Requirements

While there are no formal requirements for entry into these occupations, completion of an educational training program is a definite asset.

Training Paths

Training in these occupations is available at the Halifax Campus of the Nova Scotia Community College through a one-year program in Photography. The eleventh grade or its equivalent is required for entry. The Nova Scotia College of Art and Design in Halifax also offers a program in Photography through a Bachelor of Design degree program. This is a four-year Bachelor's degree program which typically requires completion of the twelfth grade for admission.

Skills/Aptitudes

Photographers require the ability to improvise with equipment and/or technique. They must react quickly if they see a good shot or be very patient in other cases, waiting for the precise moment to take the picture. Photographers need creativity, imagination, and artistic talent. Attention to detail is also very important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **310**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$27,000**

FOR FURTHER INFORMATION CONTACT:

Maritime Professional Photographers Association
200 Sydney Road
Port Hawkesbury, Nova Scotia
B0E 2V0

PHYSICAL SCIENCES TECHNICIANS AND TECHNOLOGISTS

Nature of the Work

This occupational group operates within a physical science specialization such as physics, geology, chemistry, geophysics, astronomy or meteorology. Duties include carrying out technological or technical functions using a knowledge of scientific and mathematical principles and laboratory practices. These occupations may involve providing technical assistance to a researcher in the physical sciences. Individuals in these positions usually work regular hours; however, irregular hours may be required to follow through on an experiment or fieldwork.

Requirements

The specific entrance requirements for entry into these occupations varies widely depending on the area of specialization; however, some level of post-secondary education is required in all cases.

Training Paths

The completion of a two- or three-year diploma program in a technology is normally required. The University College of Cape Breton in Sydney offers a three-year course in Chemical Technology and a three-year course in Mineral Technology. There is a two-year diploma program in Chemistry Laboratory Technology at the Nova Scotia Agricultural College in Truro. For those specializing in Meteorology, a four-month, employer-sponsored course is available at the Transport Canada Training Institute in Cornwall, Ontario. Other specializations in this field require a Bachelor's degree in either Metallurgy, Mineralogy, or Chemical Engineering. These five-year programs are all offered at the Technical University of Nova Scotia in Halifax. The completion of the twelfth grade or its equivalent is required for entry into all of the courses related to these occupations.

Skills/Aptitudes

The skills and aptitudes for these occupations are as varied as the entrance requirements. Some jobs require individuals to be exposed to heat, noise, vibration, fumes and dust while others have a relatively clean laboratory environment. An aptitude for mathematics and science at the high school level is necessary. An interest in scientific and technical work, and the ability to work with detailed processes, machines and techniques are also required. Familiarity with computers is important for some positions.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **430**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$35,000**

FOR FURTHER INFORMATION CONTACT:

Manager, Employment Office
National Research Council of Canada
Building M-58
Montreal Road
Ottawa, Ontario
K1A 0R6

POLICE OCCUPATIONS

Nature of the Work

This occupational group is concerned with the protection of life and property; preservation of the peace; enforcement of federal, provincial, and municipal statutes, through investigation and apprehension of offenders; intervention in family or domestic disputes to prevent injury or violation of the law; liaison with social agencies to provide delivery of appropriate services; and liaison with the community to ensure that policing services are delivered in a manner appropriate to the community.

Requirements

The Nova Scotia Police Act requires that persons being hired in police positions have successfully completed a police science program at the Atlantic Police Academy, or an equivalent institution, or have five years prior police experience. To join the Royal Canadian Mounted Police (RCMP) an individual must be a Canadian citizen, have a valid driver's license, have no criminal record, have successfully completed the twelfth grade or its equivalent, be physically fit, be nineteen years of age, be willing to transfer anywhere in Canada, and have successfully completed an internal training program.

Training Paths

Although there is no direct training available in Nova Scotia for this occupation, Holland College in Prince Edward Island offers a one-year police science program to train police officers. Successful completion of the twelfth grade is required for entrance. The RCMP require successful completion of a six-month training program which is offered in Regina, Saskatchewan. To apply, individuals should contact the nearest detachment of the RCMP.

Skills/Aptitudes

Individuals in these occupations should be aware of age, height and weight guidelines and possess a valid driver's license. Additionally, individuals must be able to give and accept orders, excel in problem solving, make decisions quickly, interact with the public and use common sense at all times. Physical strength and mental stability are also required. Good observational skills and the ability to gain the respect of the public are beneficial.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,340**
- Employment growth between 1989 and 1995 is projected to be: **significantly below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **130**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$39,000**

FOR FURTHER INFORMATION CONTACT:

Police Association of Nova Scotia
P.O. Box 1557
Halifax, Nova Scotia
B3J 2Y3

or

Recruiting Section
Royal Canadian Mounted Police
P.O. Box 2286
Halifax, N.S.
B3J 3E1

S20

PRINTING, ENGRAVING AND RELATED OCCUPATIONS

Nature of the Work

This occupational group is concerned with casting and setting type, fixing printing surfaces on plates or cylinders, chemical engraving, photoengraving, casting, molding, and electroplating. Activities may also include operating letter and lithographic presses to print text and illustrations on paper, textiles, metal and other materials; embossing; bookbinding; and related activities. Operating a press can be physically and mentally demanding as press operators are on their feet most of the time. Safe work habits are necessary in this occupation as these individuals are subject to job hazards.

Requirements

While there are no formal requirements for individuals entering these occupations, completion of courses in these areas will greatly enhance employment prospects.

Training Paths

Although there are no formal requirements for entry into these occupations, a number of related programs are available.

A program in Offset Printing is offered at two campuses of the Nova Scotia Community College. At Kingstec in Kentville the program is one year in length and requires successful completion of the tenth grade for entry. Memorial High School of the Nova Scotia Community College in Sydney Mines offers a three-year program requiring successful completion of the ninth grade or its equivalent for entry. A one-year advanced program in Four-Colour Process Printing is offered at Kingstec requiring at least one full year of work experience in the printing industry or completion of a printing course with a 75% average. The Nova Scotia College of Art and Design in Halifax offers introductory and intermediate courses in Printmaking. This institute should be contacted regarding further information on this course.

Skills/Aptitudes

Individuals in these occupations should have the ability to work well with their hands. Effective communication skills and the ability to work with others is important. Physical strength may also be an asset to some positions in these occupations as may be the ability to visualize colour.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **430**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$25,000**

FOR FURTHER INFORMATION CONTACT:

Council of Printing Industries of Canada
Suite 1908
7 Street East
Toronto, Ontario
M5C 1A2

PROFESSIONAL FIREFIGHTING OCCUPATIONS

Nature of the Work

This occupational group is concerned with the prevention of fires as well as providing protection and help in case of fire. Duties include firefighting, checking and maintaining firefighting equipment for serviceability, identifying fire hazards, and advising on appropriate steps toward fire prevention. Firefighting is one of the most hazardous occupations involving risk of death or injury.

Requirements

Individuals are required to have successfully completed the twelfth grade; have a valid driver's license; pass a written entrance exam, a medical examination, and tests of strength, physical stamina, co-ordination and agility.

Training Paths

Upon obtaining employment in these occupations an individual will receive approximately six weeks of recruit training before being assigned to station duty. Training for firefighters is a continuous process involving on- and off-the-job training. In addition, upgrading courses in all areas of firefighting and rescue operations may be taken at the Nova Scotia Firefighters School in Waverley. These courses are usually sponsored by the employer.

Skills/Aptitudes

Individuals in this occupation must be in excellent health and be able to tolerate stress, high risks, and the unexpected. The ability to react quickly is also necessary. Mental alertness, courage, mechanical aptitude, and a sense of public service are also necessary.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **940**
- Employment growth between 1989 and 1995 is projected to be: **significantly below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$32,000**

FOR FURTHER INFORMATION CONTACT:

Halifax Fire Department
5663 West Street
Halifax, Nova Scotia
B3K 1H6

SURVEYORS

Nature of the Work

This occupational group is concerned with surveying land surfaces to delineate boundaries and exact locations; describing topographic features and measuring land areas for map-making and construction work; surveying surface and underground features of mines; and surveying sea, river and lake beds. Activities may include chart making, determining navigable channels, and analyzing aerial photographs to prepare or revise topographic maps. Surveyors usually work regular hours; however, during the summer months, they often work longer hours when weather and light conditions are suitable for fieldwork. Land surveyors often stand for long periods of time and walk long distances or climb hills with heavy packs of instruments and equipment.

Requirements

Land surveyors must be registered with the Association of Nova Scotia Land Surveyors; all other surveyors do not have such a requirement.

Training Paths

Academic training is available through one of two methods. There is a two-year diploma program in Survey Technology at the College of Geographic Sciences of the Nova Scotia Community College in Lawrencetown, which is coupled with the completion of two years in the Survey Engineering program at the University of New Brunswick in Fredericton. Alternatively, individuals may go directly into the five-year Survey Engineering degree program at the University of New Brunswick. After the completion of either program the student wishing to become a land surveyor must then pass Atlantic Surveyors Board exams, article with a licensed Nova Scotia land surveyor for a period of two years, write exams in Statute and Association Law, and then carry out an assigned retracement survey. The minimum entrance requirement is completion of the twelfth grade or its equivalent. The College of Geographic Sciences also offers two-year certificate programs for survey office technicians and survey assistants.

Skills/Aptitudes

To work in this occupation, an individual should enjoy working outdoors and be able to carry equipment over long distances by foot. They should have an aptitude in mathematics and physics at the high school level and be able to perform mathematical calculations quickly. Good health, eyesight and manual dexterity are also necessary.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,010**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **60**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$32,000**

FOR FURTHER INFORMATION CONTACT:

Association of Nova Scotia Land Surveyors
Suite 301
159 Portland Street
Dartmouth, Nova Scotia
B2Y 1H9

or

College of Geographic Sciences
P.O. Box 10
Lawrencetown, N.S.
B0S 1M0

Management and Administrative Occupations

BUYERS AND PURCHASERS, WHOLESALE AND RETAIL TRADE

Nature of the Work

This occupational group is concerned with purchasing goods, materials, or business services for internal use, further processing or resale in wholesale or retail trade. Activities may include establishing requirements for the organization, interviewing suppliers, negotiating prices, arranging for delivery, consenting to payments of invoices or return of damaged or unsatisfactory merchandise, and performing other functions directly related to purchasing.

Requirements

While there are no formal educational requirements for entry into these occupations, employers generally require several years of experience in a purchasing department. Some employers require a university education.

Training Paths

Training for these occupations is usually obtained through three to five years of on-the-job experience in a related junior or clerical position. Post-secondary correspondence courses may also be taken through the Professional Purchaser Diploma Program offered by the Purchasing Management Association of Canada. These courses require successful completion of the twelfth grade or its equivalent for entrance and are taken on a part-time basis and must be completed within eight years. To obtain a general business background, a Bachelor's degree in Commerce or Business Administration can be obtained at most universities throughout the province. These programs are generally four years in length and require completion of the twelfth grade for entrance. Individual training in the specific products being purchased is a definite asset.

Skills/Aptitudes

Individuals in these occupations require leadership, organizational and communication skills. Buyers must be willing to accept new ideas, take risks, make careful decisions, and be knowledgeable about their product or service and the market for which they are doing the buying.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **620**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$28,000**

FOR FURTHER INFORMATION CONTACT:

Purchasing Management Association of Canada
Atlantic District
P.O. Box 3333
Halifax, Nova Scotia
B3J 3J1

HOTEL, MOTEL AND SERVICES MANAGEMENT OCCUPATIONS

Nature of the Work

This occupational group is concerned with performing administrative and managerial activities in organizations which provide protective services; lodging and other accommodation; food and beverage; apparel and furnishings; building and cleaning; and other services. Activities may include planning, organizing, directing and controlling. Individuals in these occupations may be required to work evenings and weekends.

Requirements

While there are no formal entrance requirements for this occupation, most managers obtain their positions by starting at a lower, entry level position, later moving into supervisory positions, and eventually becoming a manager through this process.

Training Paths

A four-year program entitled Tourism and Hospitality Management is offered at Mount Saint Vincent University in Halifax and a two-year program entitled Hospitality Administration is available at the University College of Cape Breton in Sydney. Completion of the twelfth grade or its equivalent is normally required for entry into these programs. Also, a two-year diploma program entitled Hotel-Motel Restaurant Management is offered at the I.W. Akerly Campus of the Nova Scotia Community College, the prerequisite being the eleventh grade or its equivalent.

Skills/Aptitudes

The efficient operation of a hotel requires a wide range of abilities. A hotel manager must have an aptitude for business matters. Public relations and communications skills are very important. Problem solving and decision-making abilities are essential. A hotel manager must be tactful and patient when dealing with a variety of personalities.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,900**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **110**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$27,000**

MANAGEMENT OCCUPATIONS, CONSTRUCTION

Nature of the Work

This occupational group is concerned with activities in management and administration in organizations which are involved in construction, alteration, or repair of buildings and public structures such as highways, railways, bridges, airports and docks. Activities may include developing the operating policies of the company; planning, directing, co-ordinating and controlling administrative, financial, accounting, marketing, operational, and estimating functions; developing and maintaining clientele; planning and directing office and general services; administering personnel relations; and, ensuring that all construction specifications are met.

Requirements

Although not formally required, a combination of education and extensive work experience is highly recommended.

Training Paths

Many individuals in these occupations receive training on-the-job although employers are increasingly looking for individuals with formal education. Three to five years of construction experience is generally required for a management position in this industry. A two-year course in Construction Administration Technology is offered at the Institute of Technology, in Halifax, of the Nova Scotia Community College. As well, the University College of Cape Breton offers a three-year diploma program in Civil/Construction Technology. The entrance requirement for these programs is completion of the twelfth grade or its equivalent with courses in mathematics, physics, and chemistry.

Skills/Aptitudes

Individuals entering these occupations should possess good interpersonal skills as well as effective oral and written communication skills. Leadership qualities, the ability to motivate individuals, and good organizational skills are essential. Also, a thorough knowledge of construction materials and practices is important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **800**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **50**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$42,000**

FOR FURTHER INFORMATION CONTACT:

Construction Association of Nova Scotia
P.O. Box 1476
North Halifax, Nova Scotia
B3H 5H7

T08

MEDICAL AND HEALTH ADMINISTRATORS

Nature of the Work

This occupational group is concerned with performing managerial and administrative duties in health agencies and similar establishments such as hospitals, medical clinics and health support services. Individuals in these occupations often work long hours.

Requirements

Entrance into these occupations usually requires a Master's degree and/or extensive work experience in either the medical field or in a junior administrative position.

Training Paths

Formal training in these occupations is available at Dalhousie University in Halifax. A two-year Health Services Administration degree is offered at the Master's level. Entrance into this program requires completion of a Bachelor's degree and good standing in the Graduate Management Admissions Test. Alternatively, a Bachelor's degree plus several years experience in a junior administrative or an assistant administrative position could also lead to these occupations.

Skills/Aptitudes

Hospital administrators need good managerial skills including the ability to organize, negotiate, motivate, and communicate. They must be able to work well under pressure and make difficult decisions quickly.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **700**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$44,000**

OCCUPATIONS IN MANAGEMENT AND ADMINISTRATION, N.E.C.

Nature of the Work

This occupational group includes occupations in senior and middle administration concerned with performing managerial functions such as planning, organizing, directing and controlling in an industrial, commercial, governmental or other enterprise, establishment or organization.

Requirements

Individuals are minimally required to posse-s a diploma in Business Administration from the Nova Sco ia Community College. A Bachelor's degree in Business Administration or Public Administration is recommended.

Training Paths

Diploma programs in Business Administration are offered at Mount Saint Vincent University and the Universite Sainte-Anne. These programs are two years in length and require completion of the twelfth grade for entrance. One-year diploma programs are available at three campuses of the Nova Scotia Community College. The four-year Bachelor's degree in Business Administration or Commerce is available at most of the universities in the Province. Areas of concentration may vary depending on the industry of interest. Completion of the twelfth grade or its equivalent is generally required for entry into these programs. A two-year Master's degree in Business Administration is offered at Dalhousie University and at Saint Mary's University, both located in Halifax. Dalhousie University also offers a two-year Master's degree in Public Administration. A Bachelor's degree is generally required for entrance into the Master's level programs.

Skills/Aptitudes

Individuals entering these occupations should possess good interpersonal skills as well as effective oral and written communication skills. Leadership qualities, the ability to motivate individuals, and good organizational skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **13,210**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **620**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$41,000**

FOR FURTHER INFORMATION CONTACT:

Administrative Management Society
International Chapter
c/o Lambton College
P.O. Box 969
Sarnia, Ontario
N7T 7K4

OFFICERS AND MANAGERS, FINANCIAL

Nature of the Work

This occupational group is concerned with performing managerial and administrative duties in banks, credit agencies, investment companies, or similar financial institutions and in departments within industrial, commercial, or government organizations. These individuals may also be employed by financial planning organizations, accounting firms, insurance or brokerage firms, or investment dealers. Activities may include advising decision-makers on credit and investment policies, and negotiating with financial or other institutions on matters pertaining to the general policy of the organization, and dealing with mutual fund investments. Accountants and financial managers often work long and irregular hours.

Requirements

Entrance into these occupations generally requires a Bachelor's degree in Commerce or Business Administration with a concentration in Accounting or Finance. For senior management positions, a Master's of Business Administration degree is recommended. Senior management positions are usually made available to individuals with a considerable amount of experience and/or seniority in the company. Candidates interested in finance may be required to participate in programs offered by the Institute of Canadian Bankers or Trust Companies Institute. Individuals interested in accounting may choose to specialize in Management Accounting (CMA), General Accounting (CGA), or Chartered Accounting (CA). Each of these areas have a related institution offering training and certification for interested individuals. Those institutions should be contacted for further information.

Training Paths

Bachelor's degrees in Commerce or Business Administration may be obtained at most universities in the Province. Programs are three or four years in length. Master's of Business Administration degrees may be obtained through a two-year program offered at Dalhousie and Saint Mary's University; both are located in Halifax. Entrance to these programs is based on the completion of a Bachelor's degree and on the marks obtained in the Graduate Management Admissions Test. The CMA and CGA programs require completion of the twelfth grade. The CA program requires the completion of a Bachelor's degree and sponsorship by a chartered accounting firm. The length of these programs may vary from two to six years.

Skills/Aptitudes

Individuals should possess good analytical abilities and excellent communication skills, both oral and written. A good mathematical ability is also an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **8,240**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **390**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$37,000**

FOR FURTHER INFORMATION CONTACT:

Certified General Accountants'
Association of Nova Scotia
P.O. Box 3079
Dartmouth, Nova Scotia
B2W 4Y3

or

Atlantic Provinces Association
of Chartered Accountants
P.O. Box 489
Halifax, Nova Scotia
B3J 2R7

or

Society of Management Accountants
of the Atlantic Provinces
P.O. Box 543
Halifax, Nova Scotia
B3J 2R7

ORGANIZATION AND METHODS ANALYSTS

Nature of the Work

This occupation is concerned with reviewing, analyzing and improving business and organizational systems to assist the management team in operating with efficiency and effectiveness. Activities may include conducting organizational studies and evaluations, designing systems and procedures for new work processes, conducting work simplification and measurement studies, and preparing and maintaining systems and procedures manuals. Individuals in this field often specialize in a functional area; some examples are strategic management, marketing and feasibility, production and operations management, and personnel and human resources management.

Requirements

A Bachelor's degree in Commerce or Business Administration is recommended for individuals in this occupation. Although formal training for management consultants is not required, employers stress the need for successful completion of the Canadian Association of Management Consultants' certification program.

Training Paths

Most universities in the Province offer a four-year Bachelor's degree program in Commerce or Business Administration, requiring successful completion of the twelfth grade for entrance. The Canadian Association of Management Consultants offers a self-study program to individuals employed in the field of management consulting; this course is often sponsored by the employer. This program consists of eight examinations to be completed within a three-year period. Although not compulsory, successful completion of a university degree is preferred for entrance.

Skills/Aptitudes

Individuals entering this field should possess an interest in the organization and management of the workplace, and with the integration of automation into the workplace. The ability to think in an analytical and logical manner, and to communicate and collaborate well with others is important as these individuals are often involved in teamwork.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **270**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Canadian Association of Management Consultants
Suite 805, 121 Bloor Street East
Toronto, Ontario
M4W 3M5

PERSONNEL-RELATED OCCUPATIONS

Nature of the Work

This occupational group is concerned with the effective management of the human resources in an organization. Activities may include planning, organizing, directing, controlling, implementing and maintaining policies and programs covering a wide spectrum of personnel specialties. Such specialties include recruitment and selection, human resources development and training, compensation, industrial relations, health and safety, termination and relocation counselling.

Requirements

Individuals in these occupations are generally required to have a Bachelor's degree in Business Administration or in Commerce. A Master's degree in Business Administration with a concentration in personnel or organizational behaviour is recommended for individuals interested in management positions.

Training Paths

Degree programs in business administration and commerce are available at most universities throughout the Province and are three to four years in length. Successful completion of the twelfth grade or its equivalent is generally required for entry. Business programs at the Master's level are available at Saint Mary's University and Dalhousie University, both located in Halifax. These programs are two years in length and require successful completion of a Bachelor's degree in any field for entry.

Skills/Aptitudes

Individuals entering these occupations should possess good interpersonal skills as well as effective oral and written communication skills. The ability to motivate individuals and good organizational skills are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,790**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **80**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$36,000**

FOR FURTHER INFORMATION CONTACT:

Halifax and District Personnel Association
P.O. Box 592
Halifax, Nova Scotia
B3J 3C8

or

Canadian Public Personnel Management Association
Nova Scotia Chapter
c/o Civil Service Commission
P.O. Box 943
Halifax, Nova Scotia
B3J 2V9

PRODUCTION MANAGEMENT OCCUPATIONS

Nature of the Work

This occupational group is concerned with managerial and administrative work such as directing and co-ordinating production departments, divisions, or other organizational units through subordinate managers and supervisors, in an industrial, commercial, government, or other organization.

Requirements

While there are no formal requirements to work in these occupations, a degree in engineering, science, mathematics, accounting, or business administration would be a definite asset and may be required by certain employers.

Training Paths

Some combination of formal education and extensive work experience in an industrial setting would provide the appropriate background to move into a management position. Alternatively, a Bachelor's degree in Industrial Engineering offered at the Technical University of Nova Scotia in Halifax plus related work experience could also lead to a management position. The third option is to complete a Master's degree in Business Administration at Dalhousie University or Saint Mary's University; both are located in Halifax and require the completion of a Bachelor's degree for entrance. The engineering degree is a five-year program requiring completion of the twelfth grade or its equivalent with a concentration in mathematics and the sciences.

Skills/Aptitudes

Individuals in these occupations should be able to get along well with people on all levels, possess strong leadership abilities, and be able to make decisions. Good organizational abilities and a planned approach to projects is essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,400**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **70**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$44,000**

PURCHASING MANAGEMENT OCCUPATIONS

Nature of the Work
This occupational group is involved in performing administrative and managerial functions such as planning, organizing, directing and controlling in areas such as government, industry, business and other agencies concerned with purchasing products or services for resale materials.

Requirements
While there are no formal requirements for entrance into these occupations, several years experience as a purchasing officer plus courses in accounting, business law and economics are strongly recommended.

Training Paths
Experience in junior positions is usually required for promotion to this post. Individuals usually complete two to four years of on-the-job training and related experience before obtaining management positions. Most employers expect their purchasing managers to enroll in the Professional Purchaser Diploma Program offered by the Purchasing Management Association of Canada. This program is available by either correspondence or lecture and must be completed within eight years.

Skills/Aptitudes
Purchasing managers need excellent communication and negotiating skills along with common sense and initiative. Basic mathematical skills and the ability to analyze detailed information accurately and quickly in order to make decisions is also necessary. Familiarity with computers is increasingly important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **380**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential
- Estimated average annual earnings in 1989: **$32,000**

FOR FURTHER INFORMATION CONTACT:

Purchasing Management Association of Canada
Atlantic District
P.O. Box 3333
Halifax, Nova Scotia
B3J 3J1

Health Care Occupations

DENTAL-RELATED OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
3157	Denturists
3158	Dental Hygienists
3162	Dental Laboratory Technicians

Nature of the Work

This occupational group is concerned with supportive work in the field of dentistry and includes: dental technicians who work in laboratory settings and are involved in making, altering and repairing dental devices and dentures; denturists who provide a complete denture service directly to the public; dental assistants who assist dentists in the care and treatment of patients during dental procedures; and dental hygienists who perform the cleaning of patients' teeth.

Requirements

Individuals working in these occupations are required to be licensed by the Provincial Dental Board of Nova Scotia. Denturists are required to be licensed by the Denturist Licensing Board of Nova Scotia.

Training Paths

Training in the area of dental hygiene is provided through a two-year diploma program offered at Dalhousie University in Halifax. This program requires the completion of one year of university for entrance. Training for denturists is available at the Nova Scotia School of Denturism which is housed at the I.W. Akerley Campus of the Nova Scotia Community College in Dartmouth. The program consists of two years of institutional training plus an internship in a licensed clinic. The Institute of Technology in Halifax offers a one-year certificate program for dental assistants and a two-year course in Dental Technology. The minimum entrance requirement for each of these programs is completion of the twelfth grade or its equivalent with a solid academic background in mathematics, English, and the sciences.

Skills/Aptitudes

Individuals entering into these fields should possess good interpersonal skills and a desire to help people. Manual dexterity with maximum precision is of utmost importance to work in any of the above occupations. Artistic ability may be an asset in these occupations.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,120**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **100**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$21,000**

FOR FURTHER INFORMATION CONTACT:

Denturist Society of Nova Scotia
3627 Joseph Howe Drive
Halifax, Nova Scotia
B1A 3C1

or

Nova Scotia Dental Assistants Association
P.O. Box 9142, Station A
Halifax, Nova Scotia
B3K 5M8

or

Nova Scotia Dental Technicians Association
P.O. Box 623
Halifax, Nova Scotia
B3G 2R7

DENTISTS

Nature of the Work

This occupation is concerned with examining, diagnosing, preventing and treating ailments or abnormalities of gums, teeth and related structures. Activities may include diagnosing and correcting abnormalities in growth development and positioning of teeth and other dental-facial structures, or replacing missing teeth and correcting irregularities of mouth and jaw to improve speech, eating and appearance. Dentists usually work regular hours, and some may work fewer hours as they grow older.

Requirements

Individuals working in this occupation are required to possess a license from the Provincial Dental Board of Nova Scotia.

Training Paths

The Dalhousie University Dental School offers a four-year program leading to a Doctoral degree in Dental Surgery. Following graduation, the option to undertake post-graduate work is available to those wishing to specialize. Entrance requirements include completion of at least two years of a Bachelor's degree in the sciences, a personal interview, and an acceptable score on the National Dental Aptitude Test. Better than average grades are important as there is much competition for admission.

Skills/Aptitudes

Individuals in this occupation should have good manual dexterity, an aptitude for precise and accurate work, and a reassuring manner in order to assist people in feeling relaxed. Since most dentists are in private practice, they are called upon to handle the business aspects of running an office in addition to diagnosing and treating dental disease.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **420**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$96,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Dental Association
Suite 604
5991 Spring Garden Road
Halifax, Nova Scotia
B3H 1Y6

DIETITIANS AND NUTRITIONISTS

Nature of the Work

The field of dietetics offers many career paths. Clinical dietitians, as members of medical teams, design individualized nutrition programs for people requiring dietary treatment. Community nutritionists develop programs to promote the nutritional well-being of Nova Scotians. Food service administrative dieticians manage food service operations in hospitals, homes for special care, business and industry. Some dietetic professionals work in private practice and provide consulting services in all areas of dietetics. Other options include careers in nutrition education and research. Most dietetic professionals work regular hours; however, those in hospital settings work evenings, weekends or holidays.

Requirements

Individuals working in these occupations are required to be licensed with the Nova Scotia Dietetic Association and use the professional dietetic designation (P.Dt.) after their name.

Training Paths

Training is obtained through a Bachelor's degree in either Dietetics, Nutrition, Food Service Administration, or Home Economics (with a Major in Foods and Nutrition). The relevant institutions are Acadia University in Wolfville, Mount Saint Vincent University in Halifax, and Saint Francis Xavier University in Antigonish. After completion of a Bachelor's degree, the individual must complete a one-year internship at an approved institution or a Master's degree in a related area at an approved institution. The minimum entrance requirement into the Bachelor's programs is completion of the twelfth grade or its equivalent.

Skills/Aptitudes

Individuals entering into this field should have a genuine interest in people and healthy lifestyles, and possess abilities in leadership, creativity, initiative and sound judgement. Computer skills are also valuable since dietitians use them in many aspects of their work, such as nutritional analyses of food, costing and inventory, and education.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **180**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$32,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Dietetic Association
P.O. Box 8841, Station A
Halifax, Nova Scotia
B3K 5M5

DISPENSING OPTICIANS

Nature of the Work

This occupational group is concerned with arranging for the production of eyeglasses or contact lenses; assisting customers when choosing frames; fitting customers with prescription eyeglasses or contact lenses as well as instructing on procedures for inserting, removing, and cleaning contact lenses. Activities may include arranging for grinding and polishing of lenses. Individuals in these occupations usually work regular hours; however, evening and weekend shifts may be required.

Requirements

Dispensing opticians must hold a current Certificate of Registration issued by the Provincial Board of Ophthalmic Dispensers. To qualify, the individual must be twenty-one years of age, provide proof of adequate training and experience, pass a qualifying examination, and pay the prescribed fee.

Training Paths

Training for this occupation can be obtained in either one of two ways: completion of an Ophthalmic Dispensing program plus one year of work experience or three years of on-the-job training under the supervision of a qualified employee plus completion of a home-study course. The Ophthalmic Dispensing program is only available at the Georgian College of Applied Arts and Technology in Barrie, Ontario. This is a two-year course and requires completion of the twelfth grade or its equivalent for entry.

Skills/Aptitudes

The work of a dispensing optician demands accuracy and close attention to detail. Individuals in this occupation should enjoy working with people and should be patient, approachable and reassuring. Communication skills are highly valued.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **160**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$26,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Society of Dispensing Opticians
c/o Halifax Optical
Suite 109
5880 Spring Garden Road
Halifax, Nova Scotia
B3H 1V2

HEALTH DIAGNOSING AND TREATING OCCUPATIONS, N.E.C.

Nature of the Work

This occupational group includes occupations concerned with health diagnosis and treatments. Chiropodists are mainly concerned with easing pain in the feet. Podiatrists are involved in some of these same activities and in addition, are able to take X-rays, prescribe drugs, administer local anesthetics and perform foot surgery. Naturopaths treat body disorders by a system based on natural laws governing the body and rely on diet and exercise as main therapy techniques.

Requirements

Chiropodists must complete a three-year course in chiropody after obtaining a high school completion certificate, while podiatrists are required to have a degree in podiatric medicine after successful completion of a Bachelor's degree and be registered with the Canadian Podiatry Association. Podiatrists primarily work in Ontario, Alberta and British Columbia. There are no licensed podiatrists in Nova Scotia.

Training Paths

A three-year diploma program in Chiropody is offered at George Brown College in Ontario and requires the completion of the twelfth grade for admission. Podiatrists can only receive post-graduate training in the United States through a four-year degree program. At least two years of a Bachelor's degree is required for admission into this specialized program.

Skills/Aptitudes

Individuals in these occupations should have an interest in science and medicine. Good manual dexterity and a desire to help people are also necessary. Personal qualities such as confidence, patience and good communication skills as well as a good business sense are recommended.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **120**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$44,000**

FOR FURTHER INFORMATION CONTACT:

Canadian Podiatry Association
37 Alvin Avenue
Toronto, Ontario
M4T 2A7

MEDICAL AND HEALTH OCCUPATIONS, N.E.C.

Most Significant Occupations in this Group

CCDO#	Title
3162	Respiratory Technicians
3169	Other Occupations in Medicine and Health, N.E.C.

Nature of the Work

This occupational group includes occupations concerned with activities in medicine and health. Activities may include designing, constructing, assembling and fitting prosthetic devices; operating inhalation therapy equipment, and other hospital equipment; assisting professional staff in clinics, pharmacies, morgues and animal hospitals; sterilizing and packaging hospital supplies; and assisting in preparation of special diet menus. Depending on the size and type of institution, individuals in these occupations may be required to work evenings, weekends and holidays.

Requirements

Due to the wide variety of occupations in this group, which include prosthetists, orthotists, electroencephalographic (EEC) and electrocardiographic (EEG) technicians, infection control officers, morgue attendants, and central-supply aides, other informational sources should be consulted in order to determine specific entrance requirements.

Training Paths

For many of these occupations, on-the-job training in a hospital or clinical setting is the only means of gaining experience. Some jobs do, however, require formal training at a recognized school. The Victoria General Hospital offers a program in Respiratory Therapy. This course is two years in length and requires completion of the twelfth grade for entry. Once again, other sources of information should be researched to determine precise educational and training needs for specific occupations.

Skills/Aptitudes

Individuals in these occupations usually have an interest in medicine and health. The ability to deal with people in a mature, professional manner is required. Individuals should also be able to cope with the pressures of working in a hospital environment.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **550**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$24,000**

FOR FURTHER INFORMATION CONTACT:

Canadian Health Education Society
P.O. Box 2305
Station D
Ottawa, Ontario
K1P 5K0

MEDICAL LABORATORY TECHNICIANS AND TECHNOLOGISTS

Nature of the Work

This occupational group is concerned with performing technological and technical analyses of patient samples within a medical specialization, such as haematology, cytology, histology, clinical chemistry or microbiology, to obtain data for use in the diagnosis, treatment and control of disease. Depending on the size and type of institution, individuals in these occupations may be required to work evenings, weekends and holidays.

Requirements

Individuals working in these occupations are required to be certified by either the Canadian Society of Laboratory Technicians or the Canadian Society of Laboratory Technologists (C.S.L.T.). To obtain certification, individuals must successfully complete the C.S.L.T. national examinations.

Training Paths

Training in the field of Medical Laboratory Technology can be obtained through a two-year diploma program offered at the Institute of Technology, in Halifax, of the Nova Scotia Community College. Training as a medical laboratory technician is available in the area of cytology (the study of cell samples) through a two-year program offered at the Victoria General Hospital in Halifax. The entrance requirement to each of these programs is successful completion of the twelfth grade or its equivalent with good standing in mathematics, biology and chemistry.

Skills/Aptitudes

Individuals entering these occupations should have a genuine concern for others and a tendency toward precision and accuracy with close attention to detail. Good communication skills, manual dexterity, and an ability to work co-operatively with others are important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,540**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **80**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Society of Medical Laboratory Technologists
P.O. Box 3102
South Halifax, Nova Scotia
B3J 3G6

NURSING ASSISTANTS AND RELATED OCCUPATIONS

Nature of the Work

This occupational group is concerned with giving routine nursing care to patients. Activities include taking and recording temperature, pulse, blood pressure, and respiration; giving baths and shaving patients; and serving and feeding patients. Responsibilities may include providing recreational and therapy programs, and providing supportive services in diagnostic and therapeutic procedures. Individuals in these occupations may be required to work evenings, weekends and holidays.

Requirements

Individuals working in these occupations are required to be registered and certified by the Board of Registration of Nursing Assistants of the Nova Scotia Department of Health.

Training Paths

Training for these occupations is available through six of the campuses of the Nova Scotia Community College. These are one-year programs requiring the completion of the tenth grade or its equivalent for admission.

Skills/Aptitudes

Individuals entering these occupations should enjoy caring for people of all ages in addition to having good communication and interpersonal skills. The ability to follow instructions and a willingness to work under close supervision is also necessary.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,900**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **360**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$21,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Certified Nursing Assistant Association
Suite 212
1600 Bedford Highway
Bedford, Nova Scotia
B4A 1E8

NURSING ATTENDANTS

Most Significant Occupations in this Group

CCDO#	Title
3132	Orderlies
3135	Nursing Attendants

Nature of the Work

This group includes occupations concerned with providing auxiliary services in the care of patients in hospitals, extended-care facilities, nursing homes, and similar establishments. Activities may include answering patients' call-bells; serving and collecting food trays; feeding patients; bathing and dressing patients; adjusting beds; setting up equipment; sitting with patients; and performing other routine tasks.

Requirements

There are no formal educational requirements for individuals in these occupations.

Training Paths

Training for these occupations generally takes place on-the-job; however, a program entitled Personal Care Workers (PCW) is jointly sponsored by Nova Scotia Department of Community Services and Associated Homes for Special Care. Although non-employees may take the PCW course, it must be sponsored by a licensed facility with nursing care and take place in that facility. The time required to complete this course varies according to the availability of the instructor and students.

Skills/Aptitudes

Nursing attendants and orderlies should be patient, understanding, and emotionally supportive. They should be able to respond to the patients' needs in a positive and caring manner.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **3,380**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **290**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$16,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Department of Community Services
P.O. Box 696
Halifax, Nova Scotia
B3J 2T7

OPTOMETRISTS

Nature of the Work

This occupational group is concerned with performing vision examinations and additional tests to determine the presence of visual, muscular or neurological abnormalities and eye disease. Activities include prescribing lenses, optical aids, or therapy to enable maximum vision. Optometrists who are self-employed have considerable flexibility in setting hours of work; some may work on evenings or Saturdays to meet the needs of their patients.

Requirements

An individual working in this occupation must be licensed as a Doctor of Optometry with the Nova Scotia Association of Optometrists.

Training Paths

Training for optometrists is not available in Nova Scotia. A four-year program does exist, however, at the University of Waterloo in Waterloo, Ontario. The minimum entrance requirement is completion of the twelfth grade and at least two years of university education in the field of science, which can be completed at most universities in Nova Scotia, but preferably at the University of Waterloo itself. As enrollment of Nova Scotian students is very limited, high marks in all subject areas are strongly recommended. Another course in optometry is available at the Universite de Montreal in Montreal, Quebec. This program is for French-speaking students only.

Skills/Aptitudes

Individuals working in this occupation require good eye-hand co-ordination, an aptitude for precision work, and a pleasant personality when working with patients. Since most optometrists are self-employed, business ability, self-discipline and the ability to deal with patients tactfully are necessary for success.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **60**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$58,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Association of Optometrists
P.O. Box 2718, Station M
Halifax, Nova Scotia
B3J 3P7

OSTEOPATHS AND CHIROPRACTORS

Nature of the Work

This occupational group is concerned with diagnosing and treating disorders of the human body, mainly by manipulative methods. Chiropractors utilize manual manipulation of the spine and extremities, exercise, nutrition and physio- logical therapeutics in patient care. Osteopaths are more similar to medical doctors than chiropractors in that osteopaths are able to utilize all other known diagnostic and therapeutic techniques including drugs and operative surgery in addition to manipulative therapy. As most chiropractors are self-employed, they can set their own working hours.

Requirements

Individuals in these occupations are required to be certified by the appropriate association, either the Canadian Osteopathic Association, Chiropractic Examining Board or the Nova Scotia Board of Chiropractic Examiners.

Training Paths

While there is no training available for chiropractors in Nova Scotia, the Canadian Memorial Chiropractic College in Toronto offers a four-year program leading to a Doctoral degree. Two years of a Bachelor's degree in either Biology, Chemistry, Physics or Psychology is the minimum requirement for admission. The college also offers graduate residency programs. There is currently no training available for osteopathic physicians in Canada; however, there are fifteen colleges of osteopathic medicine in the United States. Admission is usually based on successful completion of a four-year Bachelor's degree in Science and on the test score obtained on the Medical College Admission Test. These four-year programs in Osteopathy can be followed by post-doctoral studies if desired.

Skills/Aptitudes

An interest in the biological sciences, especially anatomy and physiology, and a genuine interest in the well-being of others are important. Good control of hands and fingers is necessary, as is an interest in working with others.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **30**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$74,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Chiropractic Association
16 Loggen Road
Lower Sackville, Nova Scotia
B4E 1V7

or

Canadian Osteopathic Association
575 Waterloo Street
London, Ontario
N6B 2R2

PHARMACISTS

Nature of the Work

This occupation is concerned with compounding and dispensing pharmaceuticals in hospitals, industry and retail outlets. Pharmacists advise health professionals and the public on the proper selection and use of medicines. Activities include filling prescriptions, developing new medicinal substances, and analyzing, testing and distributing drugs and related supplies. Pharmacists spend much of their time standing and often have to work evenings, weekends and holidays.

Requirements

Individuals working in this occupation are required to possess a license from the Provincial Pharmacy Board of Nova Scotia. A Master's degree or Doctoral degree is required for research positions, and often required for administrative positions.

Training Paths

Training in this field is offered at Dalhousie University through a four-year Bachelor of Science degree program in Pharmacy. The minimum entrance requirement is completion of the twelfth grade or its equivalent with an acceptable score on the Pharmacy College Admission Test.

Skills/Aptitudes

Individuals entering this occupation should have an interest in chemistry, keep abreast of new advances in the field of drug research, enjoy performing detailed work and have good oral communication skills. Computer skills are becoming increasingly more important in this field.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **800**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **40**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$41,000**

FOR FURTHER INFORMATION CONTACT:

Pharmacy Association of Nova Scotia
P.O. Box 3214
South Halifax, Nova Scotia
B3J 3H5

PHYSICIANS AND SURGEONS

Nature of the Work

This occupational group is concerned with preventing, diagnosing and treating human illnesses. Activities may include administering medical examinations; prescribing and providing treatment for diseases, disorders and injuries; performing surgical operations in the treatment of injuries, diseases, and disorders of the human body; and performing related tasks. Physicians who practice alone or in small groups tend to work long and irregular hours.

Requirements

Individuals working in these occupations are required to possess a license from the Provincial Medical Board of Nova Scotia.

Training Paths

The Dalhousie University Medical School offers a four-year program leading to a Doctor of Medicine degree. After passing the Medical Council of Canada qualifying exam, an internship of one year is required before a license to practice medicine is granted. Post-graduate training of two to eight years is available for those wanting to specialize. Students should be aware that the length of the pre-licensure training in Nova Scotia and in the rest of Canada is changing at this time. By 1992, all individuals wishing to have a license to practice medicine in Nova Scotia will have to do a minimum of two post-graduate years of training before licensure. As there is much competition for entry into this program, better than average marks are very important.

Skills/Aptitudes

Individuals in these occupations should possess warmth and sympathy, and have an interest in people as well as a strong grasp of scientific principles and their application to medical problems. Emotional stability, intellectual curiosity, social values, initiative, and personal maturity are necessary personal characteristics. Physicians have to take final responsibility for their decisions and the consequences they have on patients' lives. Good communication skills are also important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,950**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **80**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$107,000**

FOR FURTHER INFORMATION CONTACT:

Faculty of Medicine
15th Floor
Sir Charles Tupper Building
College Street
Halifax, Nova Scotia
B3H 4H7

PHYSIOTHERAPISTS, OCCUPATIONAL AND SPEECH THERAPISTS

Most Significant Occupations in this Group

CCDO#	Title
3136	Speech Therapists
3137	Physiotherapists
3138	Occupational Therapists

Nature of the Work

This occupational group is concerned with providing therapeutic treatment to physically and mentally handicapped, impaired or disabled persons using physical, psychological and mechanical means. Activities involve planning, organizing, and administering treatment in order to restore functional mobility, relieve pain, and prevent or limit permanent disability for those suffering from a disabling injury or disease. Individuals make use of heat, water, light, sound, exercise, and massage in the case of physiotherapy and make use of work, education, and recreation in the case of occupational therapy. Most individuals in these occupations work regular hours.

Requirements

Individuals working in these occupations are required to possess a Bachelor's degree in either Physiotherapy or Occupational Therapy, or a Master's of Science in either Speech Pathology or Audiology.

Training Paths

Training is provided at Dalhousie University in Halifax through a four-year Honours Bachelor of Science degree program in either Physiotherapy or Occupational therapy, and a three-year Master's in Science program in Speech Pathology and Audiology. The entrance requirement into the Bachelor level program is completion of the twelfth grade or its equivalent plus one year of university study, usually in the area of science. The Master's level program requires completion of a Bachelor's degree, preferably in the area of science or health. As competition is stiff to enter into these programs, strong academic standing in all subjects is important.

Skills/Aptitudes

Individuals in these fields should possess good interpersonal skills, personal warmth, sensitivity and creativity. It is necessary to have ingenuity and imagination in adapting activities to individual needs. A strong sense of responsibility and the ability to motivate patients is important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **490**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$33,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Society of Occupational Therapists
P.O. Box 3381 South
Halifax, Nova Scotia
B3J 3J1

or

Nova Scotia College of Physiotherapists
Suite 550
5991 Spring Garden Road
Halifax, Nova Scotia
B3J 1Y6

RADIOGRAPHICAL TECHNOLOGISTS

Nature of the Work

This occupation is concerned with the installation, operation, and maintenance of x-ray equipment used in diagnostic and therapeutic applications. Duties may include applying radioactive substances to patients for diagnostic and therapeutic purposes under the supervision of a physician. Depending on the size and type of institution, individuals in this occupation may be required to work evenings, weekends and holidays.

Requirements

Individuals working in this occupation are required to be registered with the Canadian Association of Medical Radiation Technologists.

Training Paths

Training can be obtained through one of several programs: Radiography Technology offered at the Halifax Infirmary Hospital and at the Victoria General Hospital; Radiation Therapy at the Cancer Treatment and Research Foundation in Halifax; and Nuclear Medicine Technology at the Institute of Technology, in Halifax, of the Nova Scotia Community College in conjunction with the above mentioned hospitals. Each of these programs are two years in length and require successful completion of the twelfth grade for entrance.

Skills/Aptitudes

Individuals in this occupation should be able to handle stressful working conditions, possess a strong sense of responsibility, exercise patience and courtesy with patients, and be willing to keep abreast of new advances in the field.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **350**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Society of Medical Radiation Technologists
Comp. 19, Fenerty Road
R.R. #2
Lower Sackville, Nova Scotia
B4C 2S7

REGISTERED NURSING OCCUPATIONS

Most Significant Occupations in this Group

CCDO#	Title
3131	Nurses, Except Supervisors
3130	Supervisors, Nursing Occupations

Nature of the Work

This occupational group involves caring for people and has a focus on health promotion, prevention of illness and caring for the ill. The goal of nursing is health-oriented ever in the care of the sick. Many registered nurses work in hospital settings. These nurses work in highly complex technical settings which require immediate responses to unstable conditions. Nurses in these situations provide extensive support and education to patients and their families. Registered nurses who work in the community focus on health education, lifestyle change, early childhood health, and stress management. They help people deal with daily health problems and work to identify and decrease health risks. Nursing care for the chronically ill provides support and teach self-care to patients and their families in order to promote maximum independence of the individual. Responsibilities may include supervising and co-ordinating the activities of personnel engaged in nursing and related tasks. Nurses usually have to work shifts, including evenings, weekends and holidays.

Requirements

Individuals working in these occupations are required to be registered with the Registered Nurses Association of Nova Scotia.

Training Paths

Education can be obtained through a four-year Bachelor's degree program offered at Dalhousie University, Halifax and at Saint Francis Xavier University, Antigonish, or through a two-year diploma program at one of seven schools of nursing in the Province. The entrance requirement for both programs is completion of the twelfth grade with five university preparatory courses including mathematics, chemistry and biology. After successful completion of a degree or diploma program an individual is eligible to write the Registered Nursing Examinations (RNs).

Skills/Aptitudes

Individuals entering into these occupations should have excellent communication and interpersonal skills, good physical endurance, emotional stability and a desire to respond to the emotional, physical and sociological needs of people. They should also have the ability to think critically and creatively.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **9,380**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **990**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Central Application Centre
Registered Nurses' Association of Nova Scotia
6035 Coburg Road Halifax,
Nova Scotia
B3H 1Y8

Scientists, Engineers and Other Professional Occupations

AEROSPACE ENGINEERS

Nature of the Work

This occupational group is concerned with the research, design, development, manufacture, and maintenance of aerospace vehicles and equipment. Duties may include aerodynamic design, flight testing, and structural and thermodynamic testing. Engineers develop new technologies in commercial aviation, defence systems, and space exploration. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. Training for this occupation is not available in Nova Scotia; however, there is a program at the University of Toronto in Ontario. The minimum entrance requirement is completion of Ontario grade thirteen with a strong standing in mathematics, physics, and chemistry. Completion of at least one year of university before making application is recommended. Knowledge of computers is an asset.

Skills/Aptitudes

Individuals entering into this occupation should possess an interest in engineering design, problem solving, and technology. The ability to think in an analytical and logical manner and to communicate and collaborate well with others is also necessary as engineers are often involved in teamwork.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **80**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

AGROLOGISTS

Nature of the Work

This occupational group is concerned with conducting research into the growth, genetics and viability of plants and animals, and the nature and composition of soils. Agrologists may be involved in developing new techniques for the processing and storage of agricultural products; and the development, propagation and conservation of plants and animals. Agrologists, also referred to as agricultural scientists, generally work regular hours in offices and laboratories; however, some conduct fieldwork and onsite studies.

Requirements

Individuals working in this occupation must possess a Bachelor's degree in this field and be registered with the Nova Scotia Institute of Agrologists.

Training Paths

The Nova Scotia Agricultural College in Truro offers a four-year Bachelor of Science degree in Agriculture. Completion of the twelfth grade or its equivalent with courses in science and mathematics is required for entrance. A Bachelor's degree is adequate for some sales, production management, inspection, and other non-research jobs; however, in some cases, promotions may be limited without further education or training.

Skills/Aptitudes

Agrologists are often curious and persistent individuals who enjoy detailed work. The ability to communicate well, both orally and in writing, is important. They must be able to work independently or as part of a team. A farming background is helpful but not essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **320**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$42,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Institute of Agrologists
P.O. Box 550
Truro, Nova Scotia
B2N 5E3

ARCHITECTS

Nature of the Work

This occupational group is concerned with the design and construction of buildings and related structures and the aesthetic landscaping of parks, road development and other projects. Activities may include designing; building; developing plans, specifications, and detailed drawings; arranging contracts; and exercising general supervision over construction. Architects generally work in offices; however, they also work at construction sites reviewing the progress of projects. Working evenings and weekends may be required to meet deadlines.

Requirements

Individuals in this occupation must be registered with the Nova Scotia Association of Architects in order to practice.

Training Paths

The Technical University of Nova Scotia in Halifax offers a three-year Bachelor of Environmental Design Studies (B.E.D.S.) degree. Admission requirements include the completion of at least two years of university study in any recognized program with at least one mathematics course, which also implies completion of the twelfth grade. A Master of Architecture degree is also offered at this university. This is a two-year degree which requires the completion of the B.E.D.S. program for admission. An alternate method of training requires a person to spend at least 10 years in continuous employment with architects. The potential architect must complete several correspondence courses in addition to working on-the-job. This method of preparation is not common in Nova Scotia, but is practiced in areas where access to architectural schools is limited.

Skills/Aptitudes

Individuals in this occupation should be interested in art and design, and enjoy detailed, precise work. The ability to visualize in three dimensions and draw accurately is important. Contrary to what many believe, persons planning a career in architecture do not necessarily need a high level of artistic or drawing ability.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **230**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Association of Architects
1361 Barrington Street
Halifax, Nova Scotia
B3J 1Y9

BIOLOGISTS AND RELATED SCIENTISTS

Nature of the Work

This occupational group is concerned with conducting basic and applied research into all forms of living organisms and vital processes, and their relationship to each other and to their environment. Activities include studying origin, development, growth, reproduction, structure, function, distribution and other life phenomena of a single species or community of species. This group includes scientists from many fields, such as biology, medicine, botany, and zoology. Individuals in these occupations generally work regular hours in offices and laboratories; however, some conduct fieldwork and onsite studies.

Requirements

Individuals in these occupations are generally required to hold a Master's or Doctoral degree in Biology or a related field.

Training Paths

In order to enter a Master's or Doctoral program, the individual must first complete a Bachelor of Science degree. This three-year degree is offered at most universities throughout the Province and requires the completion of the twelfth grade or its equivalent with an emphasis on mathematics and the sciences for admission. A two-year Master's in Science degree in Biology or other related areas may be completed at Acadia University in Wolfville or at Dalhousie University in Halifax. A Doctoral degree is available at Dalhousie University and requires at least two years to complete. Both the Master's and Doctoral programs require completion of a Bachelor's degree in Biology or a related field for entry. Post-Doctoral training programs in Clinical Chemistry are also available at Dalhousie University.

Skills/Aptitudes

Individuals interested in these occupations should be comfortable working with instrumentation, chemicals and biochemicals; have effective communication skills; and be able to demonstrate judgement in terms of scientific and administrative decision-making. Basic computer and mathematics skills are also assets. Those doing field research in remote areas must have physical stamina.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **350**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$38,000**

CHEMICAL ENGINEERS

Nature of the Work

This occupational group is concerned with the research, design and development of manufacturing processes in which chemical changes occur; and the supervision of the construction, operation and maintenance of chemical plant equipment. They design equipment and plants, determine and test methods of manufacturing the products, and supervise production. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals working in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. The Engineering degree can only be obtained in Nova Scotia through the five-year Bachelor of Engineering program at the Technical University of Nova Scotia in Halifax. The first two years of this program must be completed through the Engineering diploma program at one of several universities in the Province. The minimum entrance requirement is completion of the twelfth grade or its equivalent with strong standing in mathematics, physics, and chemistry.

Skills/Aptitudes

Individuals entering this occupation should possess an interest in the use and application of chemicals in process industries such as petrochemicals and pulp and paper. The ability to think in an analytical and logical manner and to communicate and collaborate well with others is necessary as engineers are often involved in teamwork. Knowledge of computers is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **100**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

CHEMISTS

Nature of the Work

This occupational group is concerned with conducting primary research to broaden the knowledge of the science of chemistry; and with conducting applied research to produce new or improved materials, compounds and substances for commercial purposes. Activities include developing analytical methodology and techniques, and performing quantitative and qualitative analyses and experiments in organic, inorganic and physical chemistry. Chemists usually work regular hours in offices or laboratories.

Requirements

Most positions require a Master's or Doctoral degree in a specialized field of chemistry.

Training Paths

Most universities offer three- and four-year Bachelor of Science degree programs in Chemistry. The basic entrance requirement is successful completion of the twelfth grade or its equivalent with a high standing in mathematics and chemistry. Master's degrees in Chemistry are offered at Dalhousie University in Halifax, Acadia University in Wolfville, and at Saint Francis Xavier University in Antigonish.

Skills/Aptitudes

Chemists should be comfortable working with delicate instruments. They must be able to combine the precision needed in mathematics with the experimentation required in this and other sciences. Basic computer skills are also an asset. Perseverance, curiosity, and the ability to concentrate on detail and to work independently are essential.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **180**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$43,000**

CIVIL ENGINEERS

Nature of the Work

This occupational group is concerned with the planning, design and supervision of the construction and maintenance of buildings, bridges, dams, tunnels, ports, docks, and other structures; water supply and sewage systems, transportation; and other facilities for public, industrial or commercial use. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals working in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. The engineering degree can only be obtained in Nova Scotia through the five-year Bachelor of Engineering program at the Technical University of Nova Scotia in Halifax. The first two years of this program must be completed through the Engineering diploma program at one of several universities in the Province. The minimum entrance requirement is completion of the twelfth grade or its equivalent with a strong standing in mathematics, physics, and chemistry.

Skills/Aptitudes

Individuals in this occupation should possess an interest in the planning and designing of buildings, bridges and dams. The ability to think in an analytical and logical manner and to communicate and collaborate well with others is necessary as engineers are often involved in teamwork. Knowledge of computers is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,070**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **60**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$46,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

ECONOMISTS

Nature of the Work
This occupational group is concerned with studying the ways a society uses scarce resources such as land, labour, raw materials, and machinery to produce goods and services. They analyze the costs and benefits of distributing and consuming these goods and services. Activities may include developing models to illustrate and forecast economic behaviour and patterns; planning methods for gathering and analyzing economic statistical data; and preparing reports, estimates and forecasts.

Requirements
A Master's degree in Economics is generally specified as the prerequisite for gaining employment in this occupation.

Training Paths
A Bachelor's degree in Economics is available at several universities in the Province. These programs are four years in length and require completion of the twelfth grade or its equivalent for admission. A Master's program is available at Dalhousie University in Halifax and at Acadia University in Wolfville. These are two-year programs that require the completion of a Bachelor's degree in Economics for entrance.

Skills/Aptitudes
Individuals in this occupation should possess good mathematical and analytical abilities. Excellent communication skills, both oral and written, are also required. Knowledge of computers would be an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **290**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential
- Estimated average annual earnings in 1989: **$41,000**

FOR FURTHER INFORMATION CONTACT:

Atlantic Provinces Economic Council
Suite 500
5121 Sackville Street
Halifax, Nova Scotia
B3J 1K1

ELECTRICAL ENGINEERS

Nature of the Work

This occupational group is concerned with the design, construction, maintenance and repair of systems which generate, transmit, distribute, control and utilize electric energy; research into electrical engineering problems and development of electrical and electronic products; and provision of technical direction in the manufacture of a wide variety of electrical and electronic equipment. Electronic equipment includes radar, computers, communications equipment, television sets, and stereo components. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals working in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. The Engineering degree can only be obtained in Nova Scotia through the five-year Bachelor of Engineering program at the Technical University of Nova Scotia in Halifax. The first two years of this program must be completed through the Engineering diploma program at one of several universities in the Province. The minimum entrance requirement is completion of the twelfth grade or its equivalent with a strong standing in mathematics, physics, and chemistry.

Skills/Aptitudes

Individuals in this occupation should possess an interest in the design and operation of electrical systems and equipment relating to computers, communications, telecommunications, electronics and power systems. The ability to think in an analytical and logical manner, and to communicate and collaborate well with others is necessary as engineers are often involved in teamwork. Knowledge of computers would be an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **740**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **40**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

GEOLOGISTS

Nature of the Work

This occupational group is concerned with conducting research into the nature and history of the earth's crust; the search for mineral and energy resources; and the distribution, circulation and properties of water. Activities may include geological mapping; identifying and classifying minerals, rocks, fossils and precious stones; laboratory research; and providing assistance in locating and developing petroleum resources, natural gas and mineral deposits. Geologists usually divide their time between office or laboratory work and fieldwork.

Requirements

The minimum educational level to work in this occupation is generally a Bachelor's degree in Geology. Some jobs with exploration companies, research institutes, or universities may require a Master's or Doctoral degree.

Training Paths

Five universities in Nova Scotia offer Bachelor's degree programs in Geology ranging in length from three to five years. The minimum entrance requirement is completion of the twelfth grade or its equivalent with a strong background in mathematics and science. Master's degree programs are available at Acadia University and Dalhousie University. Dalhousie University also offers a Doctoral program in Geology.

Skills/Aptitudes

Individuals in this occupation should have an interest in the earth's structure and materials and enjoy working outdoors, often in remote areas. A willingness to travel may also be necessary, although some geologists work entirely in a laboratory environment. They should be curious, analytical and able to communicate effectively. Those involved in fieldwork must have physical stamina.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **440**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$43,000**

FOR FURTHER INFORMATION CONTACT:

Head, Education and Public Awareness Group
Department of Mines and Energy
P.O. Box 1087
Halifax, Nova Scotia
B3J 2X1

INDUSTRIAL ENGINEERS

Nature of the Work

This occupational group is concerned with the design, initiation, and development of production procedures to manufacture units of specified quality in large quantities, while maintaining low production overhead and safe and efficient operations. Industrial engineers determine the most effective ways for an organization to use the basic factors of production: people, machines, materials, information, and energy. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals working in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. The Engineering degree can only be obtained in Nova Scotia through the five-year Bachelor of Engineering program at the Technical University of Nova Scotia in Halifax. The first two years of this program must be completed through the Engineering diploma program at one of several universities in the Province. The minimum entrance requirement is completion of the twelfth grade or its equivalent with a strong standing in mathematics, physics, and chemistry.

Skills/Aptitudes

Individuals entering this occupation should possess an interest in the organization and management of the workplace including plant layout, production, and personnel scheduling; and with the integration of automation into the workplace. The ability to think in an analytical and logical manner and to communicate and collaborate well with others is also necessary as engineers are often involved in teamwork. Knowledge of computers is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **400**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$41,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

JUDGES, LAWYERS AND RELATED OCCUPATIONS

Nature of the Work

This occupational group is concerned with applying principles related to common and statute law in the administration of justice. Activities may include presiding over judicial proceedings, conducting litigation, drawing up legal documents, advising on legal matters, and performing other legal or paralegal functions. Lawyers do most of their work in offices, law libraries and courtrooms. Lawyers in private practice may work irregular hours while conducting research, and conferring with clients.

Requirements

In order to practice law in Nova Scotia, individuals must have a Bachelor's degree in Law followed by one year of articling (practical experience in a law office). Nova Scotia requires the completion of a bar admission course and exams before a lawyer may practice.

Training Paths

Dalhousie University Law School in Halifax offers a three-year Bachelor of Law degree. A high school diploma and at least two years of a Bachelor's degree are necessary for admission. Candidates must also score well on a standardized Law School Admissions Test.

Skills/Aptitudes

Lawyers must have confidence in their own abilities. They must be able to think logically, analytically, and be willing to plead the case of any client. Individuals must be able to respond quickly, and this requires a strong command of language and an ability to express ideas clearly and easily. Tact, patience, tolerance, and an understanding of human nature are important.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,210**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **70**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$59,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Barristers' Society
1475 Hollis Street
Halifax, Nova Scotia
B3J 3M4

LIBRARIANS AND RELATED OCCUPATIONS

Nature of the Work

This occupational group is concerned with library, museum, and archival sciences. Librarians are responsible for developing, organizing, maintaining, and promoting collections of library materials. Entry level librarians in public service departments select books and other library materials, provide information and advisory service to readers, prepare bibliographies and may be involved in library programming and talks to community groups. Library environments vary widely and include public, school, university, government and business libraries. Museum curators plan, organize and maintain collections for museums and art galleries. Archivists appraise, acquire, organize and maintain permanent records and historically valuable documents. Individuals in these occupations may also be involved in planning, organizing, and supervising the work of paraprofessional and clerical staff.

Requirements

For professional qualification as a librarian, a Master's degree in Library Science is preferred. While there are no such requirements for curators, most do have university education in Museum Studies. Most archivists have a Bachelor's or Master's degrees in History, although this also is not a formal requirement to work in this field.

Training Paths

Dalhousie University in Halifax is one of seven Canadian universities offering a two-year Master's program in Library and Information Studies. A Bachelor's degree in any field is the prerequisite for admission. A three-year Bachelor of Arts degree with a major in Museum Studies is offered at the University College of Cape Breton in Sydney. This program requires completion of the twelfth grade for admission. A Master's in Museum Studies is offered at the University of Toronto and requires completion of a Bachelor's degree with Honours in any field for entry. Bachelor's degrees in History are offered at several universities throughout Nova Scotia while Master's programs are available at Dalhousie and Saint Mary's University, both located in Halifax, and at Acadia University in Wolfville. These are two-year programs which require completion of a Bachelor's degree for admission.

Skills/Aptitudes

Individuals considering a career in these fields require research skills plus intellectual curiosity and demonstrated ability to work with individuals and groups of all ages as well as other staff. Demonstrated supervisory and organizational skills are essential. A knowledge of literature and current information sources is important. A working knowledge of spoken and/or written French is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **520**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **30**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$31,000**

FOR FURTHER INFORMATION CONTACT:

President
Nova Scotia Library Association
5381 Spring Garden Road
Halifax, Nova Scotia
B3J 1E9

MATHEMATICIANS, STATISTICIANS, ACTUARIES

Nature of the Work

This occupational group is concerned with researching theories regarding mathematics, probability, statistics, and risk; developing and applying mathematical techniques for solving problems in various other fields; conducting surveys or designing experiments to compile statistical data and drawing valid conclusions; data and systems analyses; and applying mathematical and statistical methods to calculate premium and benefit payments for financial programmes such as insurance and annuities.

Requirements

Individuals in the occupations of mathematician and statistician are generally required to have completed a Bachelor's degree in Mathematics or Statistics. For advancement purposes, further study at the graduate level is recommended for careers in mathematics and statistics. Although it is not necessary to have a university degree to become an actuary, most are university graduates. Actuaries must be accredited with the Canadian Institute of Actuaries to use that professional title. To obtain full accreditation as an actuary, individuals must obtain three years of work experience and write a series of examinations administered by the Institute.

Training Paths

Bachelor's degrees in Mathematics are offered at most universities in the Province. Dalhousie University, Saint Mary's University and Saint Francis Xavier University offer Mathematics programs with a concentration in Statistics. These degree programs vary in length from three to four years. The entrance requirement is successful completion of the twelfth grade or its equivalent. Acadia University and Dalhousie University also offer programs at the Master's level in Mathematics.

Skills/Aptitudes

Individuals entering these occupations should possess strong mathematical and analytical skills, as well as a practical business sense and the ability to develop innovative solutions to new problems. Good oral and written communication skills are also important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **150**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$46,000**

FOR FURTHER INFORMATION CONTACT:

Executive Director
Canadian Mathematical Society
Suite 108,
577 King Edward St.,
Ottawa, Ontario
K1N 6N5

or

Executive Director
Canadian Institute of Actuaries
Constitution Square
Suite 1040, 360 Albert Street
Ottawa, Ontario
K1R 7X7

or

Secretary
Statistical Society of Canada
Department of Statistical and
Actuarial Sciences
University of Western Ontario
London, Ontario
N6A 5B9

MECHANICAL ENGINEERS

Nature of the Work

This occupational group is concerned with applied research, development and design of mechanical equipment and its manufacture; supervision of the operation, maintenance or repair of machines that produce, transmit or consume power or energy; and evaluation of installed plant processes related to machines. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals working in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. The Engineering degree can only be obtained in Nova Scotia through the five-year Bachelor of Engineering program at the Technical University of Nova Scotia in Halifax. The first two years of this program must be completed through the Engineering diploma program at one of several universities in the Province. The minimum entrance requirement is completion of the twelfth grade or its equivalent with a strong standing in mathematics, physics, and chemistry.

Skills/Aptitudes

Individuals in this occupation should possess an interest in the design and operation of machines and mechanical processes including transportation, equipment, robotics and manufacturing. The ability to think in an analytical and logical manner and to communicate and collaborate well with others is necessary as engineers are often involved in teamwork. Knowledge of computers is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **460**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$50,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

METALLURGICAL ENGINEERS

Nature of the Work

This occupational group is concerned with studying properties and characteristics of metals; developing, controlling and advising on processes for the extraction of metals from their ores; developing alloys; and overseeing metal manufacturing processes. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals working in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. The Engineering degree can only be obtained in Nova Scotia through the five-year Bachelor of Engineering program at the Technical University of Nova Scotia in Halifax. The first two years of this program must be completed through the Engineering diploma program at one of several universities in the Province. The minimum entrance requirement is completion of the twelfth grade or its equivalent with a strong standing in mathematics, physics, and chemistry.

Skills/Aptitudes

Individuals entering this occupation should possess an interest in the chemical and physical processes involved in metal purification and the extraction of metals from the ground. The ability to think in an analytical and logical manner and to communicate and collaborate well with others is necessary as engineers are often involved in teamwork. Knowledge of computers is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **20**
- Employment growth between 1989 and 1995 is projected to be: **above average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

METEOROLOGISTS

Nature of the Work

This occupation is concerned with conducting pure research into atmospheric phenomena and applied research to develop theories, laws, methodology and techniques for more accurate weather analysis and forecasting; and studying and reporting on climatic conditions. A large proportion of meteorologists work as weather forecasters with Environment Canada, the Department of National Defence and private sector firms. Depending on the size and type of institution, individuals in this occupation may be required to work evenings, weekends and holidays.

Requirements

A Bachelor of Science degree and a diploma in Meteorology is generally required for employment in this occupation.

Training Paths

Dalhousie University in Halifax offers a one-year diploma program in Meteorology for students who have completed a three- or four-year Bachelor of Science degree in Physics or another related subject. Those who find employment with the Federal government must successfully complete a six-month training program to develop their operational meterological skills. Individuals who wish to do research or work in management positions should have at least a Master's degree in Meteorology.

Skills/Aptitudes

The work of meteorologists is exacting, and often demands close concentration for long periods of time. Meteorologists should have good judgement, initiative and perseverance. They must be able to meet deadlines, and be able to communicate effectively, both orally and in writing, in order to supply information to users.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **80**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$43,000**

FOR FURTHER INFORMATION CONTACT:

Atmospheric Environment Service
1496 Bedford Highway
Bedford, Nova Scotia
B4A 1E5

MINING ENGINEERS

Nature of the Work

This occupational group is concerned with conducting studies on mining engineering problems; determining mine location; planning and designing the development of the mines, mine facilities, systems and equipment; advising on methods of extracting coal, minerals and metal-bearing ores from the earth; planning; organizing; and supervising the extraction of minerals and their preparation or processing. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals working in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. The Engineering degree can only be obtained in Nova Scotia through the five-year Bachelor of Engineering program at the Technical University of Nova Scotia in Halifax. The first two years of this program must be completed through the Engineering diploma program at one of several universities in the Province. The minimum entrance requirement is completion of the twelfth grade or its equivalent with a strong standing in mathematics, physics, and chemistry.

Skills/Aptitudes

Individuals entering this occupation should possess an interest in the evaluation, development, and extraction of mineral deposits including mining methods, mineral processing techniques, rock mechanics, and environmental control methods. The ability to think in an analytical and logical manner and to communicate and collaborate well with others is necessary as engineers are often involved in teamwork. Knowledge of computers is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **100**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

NON-UNIVERSITY TEACHERS

Nature of the Work

This occupation is concerned with teaching in kindergarten, elementary and secondary schools and in such institutions as community and teacher's colleges; and nursing, technical, vocational and fine arts schools. During the summer and summer holidays, teachers may choose to teach, do research, travel, or pursue non-academic interests.

Requirements

Certification is compulsory in this occupation. A certificate indicating the level of training attained is issued by the Department of Education in Halifax to applicants who provide evidence of satisfactory training.

Training Paths

Teacher training is provided through several institutions in Nova Scotia. The Nova Scotia Teacher's College in Truro offers a three-year Associate in Education program. Bachelor of Education programs are offered at Saint Francis Xavier University in Antigonish, Acadia University in Wolfville, and at Saint Mary's University, Dalhousie Univers ty, Mount Saint Vincent University, and the Nova Scotia College of Art and Design, all located in Halifax. At some universities, a one- or two-year Bachelor of Education degree can be earned after completion of another Bachelor's degree. These programs allow graduates to teach elementary and secondary school classes. Specialized study leading to Bachelor of Education degrees in Special Education, Physical Education, Music, Home Economics, Industrial Arts, or Early Childhood Education can be taken at various universities in Nova Scotia.

Skills/Aptitudes

Teachers should enjoy working with young people. They should be patient, imaginative, objective, and resourceful; and be able to communicate ideas in a clear and concise, yet pleasant, manner. Kindergarten and elementary school teachers should be organized, creative, and dependable. They should be able to communicate with students on an educational and an emotional level. Secondary school teachers should be knowledgeable about their subject and able to communicate with and motivate students.

A teacher's workday involves more than just school hours. Many are committed to after-school activities in sports, drama and other areas. They must also attend meetings with other teachers to keep informed of new material to be taught, or new methods of teaching. In addition to these activities, they must plan their lessons, and prepare any resource material they might need.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **16,900**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **1,090**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$40,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Teachers Union
3106 Dutch Village Road
Halifax, Nova Scotia
B3L 4G1

PETROLEUM ENGINEERS

Nature of the Work

This occupational group is concerned with studying geological surveys, earth samples and other data to advise on both the means of developing oil and gas fields and the equipment to be used in the extraction, storage and initial treatment prior to transportation. Many petroleum engineers plan and supervise drilling operations. If drilling is successful, petroleum engineers work to achieve the maximum profitable recovery of oil and gas by determining the most efficient production methods. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals working in this occupation are required to be registered with the Association of Professional Engineers.

Training Paths

The educational requirements to obtain registration include the completion of a Bachelor of Engineering degree program and a two-year work term. The only training in Canada for petroleum engineers is offered at the University of Alberta in Edmonton. This degree program is four years in length. The minimum entrance requirement is completion of the twelfth grade or its equivalent with a strong standing in mathematics, physics and chemistry.

Skills/Aptitudes

The ability to think in an analytical and logical manner and to communicate and collaborate well with others is necessary as engineers are often involved in teamwork. Knowledge of computers is an asset.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **70**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

PHYSICISTS

Nature of the Work

This occupational group is concerned with conducting theoretical, experimental, and applied research related to the scientific and commercial utilization of heat, light, acoustics, electricity, magnetism, and other physical phenomena. Individuals may be involved in managing scientists and engineers. Activities may include conducting experiments; analyzing results; producing research data to formulate or substantiate new theories, concepts or laws; observing forms of energy and their interaction and effect on matter; and devising methods to apply the knowledge gained to problems in such fields as science, engineering, medicine and production.

Requirements

Most positions require a Master's or Doctoral degree in a specialized field of physics.

Training Paths

A Bachelor of Science degree in Physics is at least four years in length and offered at most universities in Nova Scotia. The basic entrance requirement is completion of the twelfth grade or its equivalent with good standing in mathematics and physics. Senior research or teaching positions in physics require a Master's or Doctoral degree. A Master's degree in Science with a specialization in Astronomy and a Bachelor of Science degree in Physics with an Astrophysics option are available at Saint Mary's University. Saint Francis Xavier University and Dalhousie University offer two-year Master's degrees in Physics requiring completion of a Bachelor's degree for entrance. Dalhousie University also offers a Doctoral degree in Physics.

Skills/Aptitudes

Physicists should have perseverance, imagination and initiative, along with a keen mind and a sense of curiosity. An analytical ability and a desire to conduct research into areas of physics are important.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **40**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$43,000**

FOR FURTHER INFORMATION CONTACT:

Canadian Association of Physicists
Suite 903
151 Slater Street
Ottawa, Ontario
K1P 5H3

V03

PROFESSIONAL ENGINEERS, N.E.C.

Nature of the Work

This occupational group is concerned with occupations involved with the practical application of the laws and principles of architecture and engineering for the design, development, installation, production, utilization and maintenance of machines, materials, instruments, structures, processes and services. Some engineers work in an office most of the time, but others work in laboratories, industrial plants, or construction sites, where they inspect, supervise, or solve onsite problems.

Requirements

Individuals in these occupations are generally required to have an engineering degree and be registered with the Association of Professional Engineers.

Training Paths

There are a number of occupations within this group, some of which include marine, geological, forestry and agricultural engineering and marine architecture, as well as community planning.

A Bachelor's degree in Agricultural Engineering may be obtained at the Technical University of Nova Scotia in Halifax. The first two years must be completed through the Engineering diploma program at one of several universities the Province. Programs in forestry and geological engineering are not available in Nova Scotia; however, the University of New Brunswick in Fredericton offers Bachelor's level degrees in these areas. These programs are either four or five years in length. For each of the programs mentioned above, successful completion of the twelfth grade or its equivalent with a high standing in chemistry and physics is required.

Master's programs in Applied Science with a concentration in either Marine Architecture or Marine Engineering are offered at the Technical University of Nova Scotia in Halifax. A Bachelor's degree in Engineering with high standing is required for entry. These programs are generally one to two years in length.

The Technical University also offers a four-year Bachelor's program and a one- or two-year Master's level program in Environmental Design Studies. The Bachelor's program requires the completion of two successful years of university, while the Master's program requires completion of a Bachelor's degree in a related area of study.

Skills/Aptitudes

Individuals entering into these occupations should possess a mechanical aptitude and an interest in engineering design and problem solving. The ability to think in an analytical and logical manner and to communicate and work well with others is also necessary as engineers are often involved in teamwork. Knowledge of computers is an asset.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **290**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$45,000**

FOR FURTHER INFORMATION CONTACT:

Association of Professional Engineers of Nova Scotia
Suite 920
1355 Barrington Street
P.O. Box 129
Halifax, Nova Scotia
B3J 2M4

V20

PSYCHOLOGISTS

Nature of the Work

Psychologists provide a range of services requiring different types of training. Experimental psychologists, usually found in university settings, teach psychology and conduct scientific research into human and animal behaviour. Clinical psychologists use their knowledge of human behaviour to provide assessment, treatment, and research for individuals with emotional difficulties, learning disabilities, marital problems, child behaviour problems, brain injury, sexual deviance, fears and phobias, stress-related disorders, pain and many other concerns. In Nova Scotia, psychologists are employed by hospitals, universities, mental health clinics, the RCMP, and school boards. Many psychologists work in other settings, run their own private practices, or work as consultants to business and industry.

Requirements

Psychologists working in Nova Scotia must have a minimum of a Master's degree in Psychology and must be registered with the Nova Scotia Board of Examiners in Psychology. However, a Doctoral degree is required for many clinical, research, and teaching positions, and for registration in many other provinces.

Training Paths

A four year Bachelor's degree with Honours in Psychology is generally the prerequisite for further training in this area. Most universities in Nova Scotia offer this program, which requires completion of the twelfth grade or its equivalent for entrance. Master's degrees in Clinical and Experimental Psychology are offered at Dalhousie University and Saint Mary's University in Halifax, and at Acadia University in Wolfville. These programs are a minimum of two years in length and require an Honour's degree for entrance. Mount Saint Vincent University offers a Master's degree in School Psychology which generally requires a Bachelor's degree with a Psychology major plus a Bachelor of Education degree for entrance. Dalhousie University has a two-year Research/ Experimental Doctorate which requires a Master's degree for entrance. The Clinical Psychology Doctoral program is a five-year program requiring an Honour's degree for entrance. Students should check carefully to determine which program(s) will provide them with the training required to work in the areas of their interest and whether the program would make them eligible for registration as a psychologist.

Skills/Aptitudes

A psychologist should be mature, tolerant of others, and have a genuine interest in working with people. Strong oral and written communication skills are important, as is strength in mathematics and science.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **350**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **20**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$36,000**

FOR FURTHER INFORMATION CONTACT:

Association of Psychologists of Nova Scotia
P.O. Box 594
Station M
Halifax, Nova Scotia
B3H 2R7

V24

SOCIAL SCIENCE OCCUPATIONS, N.E.C.

Nature of the Work

This occupational group is composed of a wide range of occupations concerned with human society, its social and political institutions, and its environment. Activities may include conducting research into the development and functioning of political institutions; investigating the characteristics of areas of the earth's surface and its inhabitants; interpreting interactions of physical and human environment; researching into past and current events; and studying the origin, development, and structure of languages. Depending on the size and type of institution, individuals in these occupations may be required to work irregular hours, including evenings, weekends, and holidays.

Requirements

While these occupations have no formal requirements for entrance, it is strongly recommended that the individual possess either a Master's or a Doctoral degree to fully qualify and specialize in one area.

Training Paths

Bachelor's and Master's degree programs in Political Science, History, and Geography are available at several universities in the Province. A Bachelor's degree in Home Economics is available at Mount Saint Vincent University in Halifax. The Nova Scotia College of Art and Design in Halifax offers a four-year Bachelor's program in Environmental Planning. The Technical University of Nova Scotia, also in Halifax, offers a Master's program in Urban and Rural Planning. The various Bachelor level programs are three to four years in length and require the completion of the twelfth grade for admission. The Master's level programs are two years in length and require the completion of a Bachelor's degree for entry.

Skills/Aptitudes

Individual skills and aptitudes will vary depending on the area of specialization. An interest in the social sciences at the high school level and enjoyment in reading and writing are necessary. As individuals in these occupations often spend a great deal of time conducting and/or analyzing research, the ability to organize, interpret, and correlate data is important. Good communication skills are also required.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **150**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$38,000**

FOR FURTHER INFORMATION CONTACT:

Executive Director
Social Science Federation of Canada
Suite 415
151 Slater Street
Ottawa, Ontario
K1P 5H3

SOCIAL WORKERS AND RELATED OCCUPATIONS

Nature of the Work

This occupational group is concerned with giving assistance to individuals and groups with problems, such as poverty, illness, family maladjustment, antisocial behaviour, and inadequate housing. Activities may include conducting research; providing individual and group counselling in the fields of employment, rehabilitation and marital relationships; or organizing and supervising social, recreational and cultural activities in community centres, residential treatment facilities, and similar institutions. Depending on the size and type of institution, individuals in these occupations may be required to work irregular hours, including evenings, weekends, and holidays, both in the office and out in the field.

Requirements

The generally accepted minimum requirement to work in these occupations is a Bachelor's degree in either Education, Social Work, or Psychology. A Master's degree in Social Work is generally required for positions in the mental health field and is almost always necessary for supervisory, administrative, and research positions. A Doctoral degree in Social Work is usually required for teaching and is desirable for some research and administrative positions.

Training Paths

Bachelor's degrees in Education and Psychology are available at most universities in the Province. These are either three- or four-year programs and require completion of the twelfth grade or its equivalent for admission. A Bachelor of Social Work degree is offered at Dalhousie University in Halifax. This program is four years in length; the completion of at least one year of another Bachelor's level program is recommended as well as the student being at least twenty-five years of age. For those wishing to work as a social work assistant, a Community Services certificate course is available through the Nova Scotia Department of Community Services and is taught at the Institute of Technology, in Halifax, of the Nova Scotia Community College. This is a ten-month course and is available to those with completion of the twelfth grade or its equivalent plus two years of related work experience.

Skills/Aptitudes

Patience, understanding, maturity and good listening skills are all necessary for those working in these occupations. These individuals should have above average ability to learn, reason, make decisions and express ideas clearly. An interest in the social welfare of others and a desire to help to improve it are required.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **1,840**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **90**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **average**

Earnings Potential

- Estimated average annual earnings in 1989: **$30,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Association of Social Workers
16 Grandview Drive
Dartmouth, Nova Scotia
B2W 1X5

or

Admissions Co-ordinator
Maritime School of Social Work
6414 Coburg Road
Halifax, Nova Scotia
B3H 2A7

SOCIOLOGISTS AND ANTHROPOLOGISTS

Nature of the Work

This occupational group is concerned with investigating the origin, development, evolution, lifestyle and social relationships of groups of human beings. Sociologists concentrate on the structure, social patterns and inter-relationships of human societies, while anthropologists are more interested in the origin and functioning of society with emphasis on human evolution, physical characteristics and geographical distribution. Activities may include collecting, organizing, interpreting and presenting scientific data; conducting experiments; and teaching within a community college or university setting.

Requirements

Sociologists and anthropologists in any specialty are generally required to hold a Master's or Doctoral degree.

Training Paths

Bachelor's degrees in Sociology and Anthropology are available at several universities in Nova Scotia. These are generally four-year programs which require the completion of the twelfth grade or its equivalent for entry. A Master's degree in Sociology can be obtained from Dalhousie University in Halifax or Acadia University in Wolfville. This is a two-year program which requires the completion of a Bachelor's degree for entry. Doctoral degrees in Sociology are not available in Nova Scotia but are available at the University of New Brunswick in Fredericton. There are no schools in the Atlantic Provinces offering a Master's degree in Criminology; however these programs are offered in Ottawa and Toronto.

Skills/Aptitudes

Sociologists and anthropologists should be curious about people and society, and how they interrelate. A knowledge of statistics and computers is necessary when organizing and interpreting data. Good communication skills are needed to obtain information from people, and to relate study results. Objectivity is important when describing and analyzing surveys.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **10**
- Employment growth between 1989 and 1995 is projected to be: **below average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential

- Estimated average annual earnings in 1989: **$38,000**

FOR FURTHER INFORMATION CONTACT:

Canadian Sociology and Anthropology Association
c/o Concordia University
Suite N-317
1455 ouest boulevard de Maisonneuve
Montreal, Quebec
H3G 1M8

TRANSLATORS AND INTERPRETERS

Nature of the Work
Translators are concerned with the written translation from one language to another while interpreters are concerned with the spoken translation in a consecutive or simultaneous manner.

Requirements
Translators and interpreters are required to hold a Bachelor's degree in translation or linguistics, or the equivalent in training and experience.

Training Paths
In Canada, most programs concentrate on translation from English into French. Four- to five-year programs are offered for written translation at the Universite de Moncton in New Brunswick, Universite de Laval in Quebec, Universite de Montreal, McGill University, Universite du Quebec in Trois Rivieres, Ottawa University and Laurentian University in Sudbury, Ontario. Specialized programs in interpreting are available at Laurentian University and Ottawa University. These specialized programs are two years in length.

Skills/Aptitudes
Translators must have a thorough knowledge of at least two languages and excellent writing skills. A translator should only translate into his/her native language. Interpreters must possess excellent oral expression, a great ability to concentrate, and a good memory. They must be able to think quickly and clearly.

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment
- Estimated employment in 1989: **60**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **N/A**

Unemployment
- The unemployment rate during the third quarter of 1989 was: **above average**

Earnings Potential
- Estimated average annual earnings in 1989: **$32,000**

FOR FURTHER INFORMATION CONTACT:

Corporation of Translators,
Terminologists and Interpreters of New Brunswick
C.P. Box 427
Fredericton, New Brunswick
E3B 4Z9

UNIVERSITY FACULTY

Nature of the Work

This occupational group is concerned with teaching one or more subjects within a prescribed curriculum and conducting research and publishing findings in a particular field of knowledge within universities and degree-granting colleges. University faculty generally have flexible work schedules, they may work staggered hours and teach classes in the evening. During summer holidays they may choose to teach, do research, travel, or pursue nonacademic interests.

Requirements

Employment in these occupations usually requires a Master's degree or Doctoral degree in a specialized area.

Training Paths

Master's degrees are available in a variety of disciplines at several universities in the Province. Individuals in need of more information should consult specific university calendars to determine where applicable programs are taught. Education at the Doctoral level is available at Dalhousie University and the Technical University of Nova Scotia, both located in Halifax. The Master's degree requires a Bachelor's degree for entrance and the Doctorate requires either a Master's or a Bachelor's degree with Honours. The Master's program is typically two years in length. The Doctoral program is generally longer, including two years of course work followed by two or three years of research and thesis writing.

Skills/Aptitudes

Individuals in these occupations should have good oral and written communication skills. Universities expect faculty to publish articles regularly and sometimes to write books, thus good writing skills are required. Most university teachers carry out research on which to base their articles so the ability to conduct and analyze research is important. University faculty should be intellectual and possess inquiring and analytical minds, as well as a strong desire to pursue and disseminate knowledge.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **2,140**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **110**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$49,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Confederation of University Faculty Association
Suite 204
1541 Barrington Street
Halifax, Nova Scotia
B3J 1Z5

VETERINARIANS

Nature of the Work

This occupational group is concerned with diagnosing, treating, controlling and preventing animal disorders and disease. Activities may include advising clients on feeding, breeding and care of animals; operating hospitals; and raising animals to be used in research. Typically, veterinarians diagnose medical problems in their animal patients, perform surgery, and prescribe and administer medicines and drugs. Although many veterinarians work regular hours, those in private practice often work long hours, including evenings, weekends and holidays.

Requirements

To become licensed to practice veterinary medicine in Nova Scotia, individuals must complete a four-year Bachelor's degree in Veterinary Medicine at a recognized veterinary college, write the National Examining Board examination, and be accepted as a member of the Nova Scotia Veterinary Medicine Association.

Training Paths

The Atlantic Veterinary College in Prince Edward Island offers a four-year program in this area. To be accepted into Veterinary Medicine, one must complete at least two years of university at the Bachelor's level and have a solid academic background, preferably in science. Many universities offer programs in Pre-veterinary Studies. However, because competition is stiff, completion of a Bachelor's degree is preferred. A personal essay on the applicant's aspirations for veterinary medicine is also required with the application, as well as considerable farm and clinical experience.

Skills/Aptitudes

Veterinarians should have an interest in science, especially biology, and they should love and understand animals. Individuals in this occupation should also possess integrity, reliability, maturity, and determination as well as good oral and written communication skills. Long working hours may be characteristic of this occupation.

NOVA SCOTIA LABOUR MARKET CONDITIONS:

Employment

- Estimated employment in 1989: **120**
- Employment growth between 1989 and 1995 is projected to be: **average**
- Average number of new job openings per year (including attrition) between 1989 and 1995 is estimated at: **10**

Unemployment

- The unemployment rate during the third quarter of 1989 was: **significantly below average**

Earnings Potential

- Estimated average annual earnings in 1989: **$49,000**

FOR FURTHER INFORMATION CONTACT:

Nova Scotia Veterinary Medical Association
Agricultural Centre
Kentville, Nova Scotia
B4N 1J5

CANADIAN FORCES OCCUPATIONS

CANADIAN FORCES/LES FORCES CANADIENNES

Nature of the Work

The role of the CF is to provide the maritime, air, land and support forces to meet Canada's defence commitments. By fulfilling this role the CF contributes to:

1. Sovereignty Protection—monitoring Canadian waters and airspace, as well as conducting military training in the far north;
2. International Co-operation—aiding in deterrence and collective security by participating in a wide range of co-operative activities with NATO, NORAD and with other allied nations;
3. Peacekeeping—participating in United Nations peacekeeping missions around the world;
4. Search and Rescue—responding to between eight and nine thousand incidents each year on land and at sea; and
5. Assistance to other Departments, Civil Authorities and Civilian Organizations—involvement ranging from searching for missing persons to providing disaster relief.

Within the available Military Occupation Choices (MOC) it is possible to choose from 65 Non-Commissioned Member (NCM) occupations or 32 officer occupations. Most of the occupations represented in this publication have equivalents in the CF, and in addition the CF offers several more which have no civilian counterpart. An individual could be offered a position in a technical, operator or support occupation in either the air, land or maritime element.

Requirements

To be enrolled in the CF candidates must be at least 17 year of age and have Canadian citizenship They must also meet the minimum requirement on CF aptitude tests, as well as minimum CF medical enrolment standards which include being within an acceptable weight range for given heights. In cases where the minimum medical standard for a specific MOC are more stringent than the general CF standards, the MOC standards must be met.

Non-commissioned members must have successfully completed the tenth grade while officers must have successfully completed the twelfth grade with credits in English 441, Math 441 or 442, and one of either Physics or Chemistry 441, as well as all other credits required for high school graduation.

In addition to these basic requirements there may be additional requirements specific to a MOC or entry plan.

Training Paths

Individuals joining the CF do basic training. NCMs do their initial training at Canadian Forces Recruit School in Cornwallis, Nova Scotia. Officer cadets do their initial training at either the Canadian Forces Officer Candidate School in Chilliwack, British Columbia, or at the Canadian Forces Leadership Academy in Borden, Ontario. All basic training is tough; it is designed to orient candidates to the military, to teach basic military skills and discipline, and to place candidates in top physical shape. Depending on the MOC into which candidates are enrolled, further training will be conducted at one or more of the dozens of military units throughout Canada which serve as teaching establishments. The length of time spent in training before being qualified in the basics of a specific occupation may vary from a couple of months to a couple of years, again depending on the MOC.

The CF offers fully subsidized education to certain outstanding applicants. Some of these plans are as follows:

1. Regular Officer Training Plan (ROTP)—up to four years subsidized education at a Canadian Military College or a civilian university leading to a baccalaureate degree and a commission as an officer in the CF;
2. Medical Officer Training Plan (MOTP)—subsidization for the last three years of medical school and a one or two year internship, followed by employment as a doctor in the CF;
3. Dental Officer Training Plan (DOTP)—subsidization for four years of dental school followed by employment in the CF as a dental officer; and
4. Marine Engineering Technical Training Plan (METTP)—subsidization for three years leading to a technologist diploma and employment as a marine engineer mechanic in the navy.

Primary Reserve(PRes) Individuals in the PRes do not serve full time, but rather train on designated nights and weekends. Each summer, PRes members will train for several weeks at a time, often with their regular force counterparts. Individuals may belong to the PRes while attending school or employed full time.

Skills/Aptitudes

CF members must be able to work in demanding circumstances sometimes for long periods of time. They must readily accept direction while having the potential to become supervisors and leaders. The CF is a team and its members must all work together to accomplish a task. Candidates must readily accept a challenge, be it a physical or mental one. Additional skills and aptitudes required for specific MOCs may be discussed with CF recruiting personnel.

Canadian Forces continued over ...

CANADIAN FORCES/LES FORCES CANADIENNES,

continued

NOVA SCOTIA
LABOUR MARKET CONDITIONS:

Employment

Nationally, the CF comprises approximately 88,000 regular force members and 25,000 primary reserve members. Annual intake can be as high as 8,000 people in all MOCs across the country.

Earnings Potential

The annual salary will be dictated by the candidates' rank. The salary will increase with rank and with each year an individual remains in the CF.

NCM:

- Estimated annual earnings for a new private in 1989: **$17,600**
- Estimated annual earnings for a Corporal in 1989 (attainable in four years): **$29,500**

Officer:

- Estimated annual earnings for an Officer Cadet in 1989: **$14,700**
- Estimated annual earnings for a Captain in 1989 (attainable in four years): **$39,000**

FOR FURTHER INFORMATION:

Readers are advised that the foregoing information is very general. For specific information and career counselling about occupations in the Canadian Forces, contact:

Canadian Forces Recruiting Centre Halifax
Suite 215
5251 Duke Street
Scotia Square
Halifax, Nova Scotia
B3J 1N9

APPENDICES

APPENDIX A

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APPENDIX C

DATA SOURCES AND NOTES

OCCUPATIONAL GROUP TITLE AND CODE:

In order to cover as broad a range of occupations as possible in **Career Options** over 400 specific occupations as defined by the *Canadian Classification and Dictionary of Occupations* (CCDO) at the four-digit level were clustered into approximately 150 occupational groups. This clustering of occupations involved the combination of specific four-digit CCDO occupations into occupational groups on the basis of skill, education, and training requirements. Each occupational group is assigned a unique title. For occupational groups containing only one specific four-digit CCDO occupation, the original CCDO title is generally used. For occupational groups containing more than one four-digit CCDO occupation a title was devised to reflect the types of occupations contained in the group.

A complete translation index from occupational group title to CCDO code and from CCDO code to occupational group title is presented in **Appendices A** and **B** respectively. A list of up to five of the most significant four-digit CCDO occupations in a particular occupational group is included in the information profiles in **Career Options**. As noted above, the complete list of specific occupations in a particular occupational group is presented in **Appendix A**.

NATURE OF THE WORK:

This section details the basic types of work performed by individuals in a particular occupational group. Information was derived from the CCDO, Statistics Canada's *Standard Occupational Classification*, individuals and organizations associated with the occupation, and various other counselling documents. A full listing of sources used in **Career Options** is contained in the bibliography.

REQUIREMENTS:

Here the education and/or level of training required in order to obtain employment within a particular occupational group is indicated. Requirements were determined with reference to *Careers Nova Scotia*, *Careers Canada*, and individuals and organizations associated with specific occupations.

TRAINING PATHS:

Under this heading, the normal methods for obtaining the skills to work in the given occupations are summarized. Where appropriate, the institutes which provide the education and/or training an individual should acquire in order to obtain employment in a particular occupational group are outlined. Information on training paths was obtained from community college and university calenders, various inventories of university courses, and *Directions: An Inventory of Education and Training Offered in Nova Scotia*. In addition, information pertaining to requirements for on-the-job training or work experience was obtained from a variety of sources including professional associations, industry associations and employers.

EMPLOYMENT DATA:

Occupational forecasts presented in **Career Options** are based on a revised version of the 1989 Provincial Scenario of the Canadian Occupational Projection System (COPS). COPS is a computerized occupational forecasting system developed and maintained by Employment and Immigration Canada (EIC). The Provincial Scenario was developed jointly by the Nova Scotia Regional Office of Employment and Immigration Canada (Economic Services), the Nova Scotia Department of Industry, Trade and Technology, the Nova Scotia Department of Finance and the Nova Scotia Department of Advanced Education and Job Training.

The COPS system is based on a forecast of economic activity for 62 major industries developed by the forecasting firm, Informetrica Limited. These 62 industry forecasts are broken down into specific forecasts for 500 four-digit CCDO occupations through an industry/occupation matrix derived from the 1986 census of Canada.

Estimated Employment in 1989:

This indicates the estimated 1989 employment level in the specific occupational group as determined through revised Canadian Occupational Projection System (COPS) estimates. The estimate includes all individuals employed in the group (i.e. full-time and part-time workers, new entrants and fully experienced individuals).

Employment Growth From 1989 to 1995:

Here the growth rate in a particular occupational group relative to the overall projected employment growth for Nova Scotia is indicated. *Above average* employment growth indicates that the employment growth for the particular occupational group is more than 50% above the average for all occupations in Nova Scotia. *Below average* employment growth indicates that the employment growth for the particular occupation is at least 50% lower than the average for all occupations in the Province.

Average Number of New Job Openings:

This average refers to the average annual number of new jobs likely to occur in a particular occupational group from 1989 to 1995. New job openings arise primarily due to two factors, new employment growth and attrition. New employment growth arises due to new firms starting up and existing firms increasing employment levels. Attrition may result from a number of factors. Attrition occurs when individuals currently employed in a particular occupation either change occupation, temporarily withdraw from the labour force (eg. return to school), retire, or move to another province or country. In most occupations attrition accounts for the majority of new job openings. Attrition rates used in **Career Options** range from 2.5% to about 20%. Occupations with a high attrition rate tend to be associated with a low skill level and educational requirement. Occupations with a low attrition rate tend to be associated with a high level of training.

Unemployment Information:

The unemployment information presented in **Career Options** indicates the unemployment rate for a particular occupational group relative to the overall unemployment rate for all occupations in Nova Scotia. Unemployment rates are calculated on the basis of the number of unemployment insurance beneficiaries in an occupation as of September 1989. It is noted that these rates are not comparable to Labour Force Survey (LFS) estimates of unemployment.

The unemployment rate for a particular occupational group may be listed as either significantly below average, below average, average, above average, or significantly above average. These ranges are defined as follows:

Significantly below average: the unemployment rate is more than 50% lower than the average for all occupations in Nova Scotia.

Below average: the unemployment rate is 26% to 50% lower than the average for all occupations in Nova Scotia.

Average: the unemployment rate falls within the average unemployment rate for all occupations in Nova Scotia plus or minus 25%.

Above average: the unemployment rate is 26% to 100% higher than the average for all occupations in Nova Scotia.

Significantly above average: the unemployment rate is more than twice as high as the average for all occupations in Nova Scotia.

Estimated Annual Earnings in 1989:

The estimated average annual earnings of full-time, full-year workers in the occupational group as of 1989 is indicated. It should be noted that this figure is the average for all people in the given occupational group. Starting wages are generally significantly below this figure. Earnings in 1989 are calculated on the basis of 1985 earnings adjusted for estimated income increases over the period. Nova Scotia earnings data for 1985 were obtained from the 1986 census of Canada. In some cases where data was not available for occupations in Nova Scotia, national income levels were adjusted to obtain estimates for Nova Scotia.

APPENDIX D

ADDRESS LIST
of Nova Scotia Post-Secondary Institutions and Related Educational Institutions

Annapolis Campus
P.O. Box 940
Commercial Street
Middleton, Nova Scotia
B0S 1P0
825-3491
Attn. Mr. J.R. Norton

Burridge Campus
Pleasant Street
Yarmouth, Nova Scotia
B5A 2L2
742-3501
Attn. Mr. G. Avis

Colchester Regional Vocational School
P.O. Box 850
Truro, Nova Scotia
B2N 5G6
895-7995
Attn. Mr. R.J. MacDonald

College of Geographic Sciences
P.O. Box 10
Lawrencetown, Nova Scotia
B0S 1M0
584-2226
Attn. Mr. John Wightman

Cumberland Campus
P.O. Box 550
Springhill, Nova Scotia
B0M 1X0
597-3737
Attn. Mr. S.K. Uberoi

Halifax Campus
1825 Bell Road
Halifax, Nova Scotia
B3H 2Z4
424-7999
Attn. Mr. John MacNeil

Hants Campus
P.O. Box 2079
Windsor, Nova Scotia
B0N 2T0
798-8348
Attn. Mr. W. Quinn

Institute of Technology
5685 Leeds Street
P.O. Box 2210
Halifax, Nova Scotia
B3J 3C4
424-7529
Attn. Mr. Dennis Godley

I.W. Akerley Campus
21 Woodlawn Road
Dartmouth, Nova Scotia
B2W 2R7
434-2020
Attn. Mr. Frank Pottie

Kingstec
P.O. Box 487
Kentville, Nova Scotia
B4N 3X3
678-7341
Attn. Mr. Richard French

Lunenburg Campus
75 High Street
P.O. Box 1450
Bridgewater, Nova Scotia
B4V 1V8
543-2295
Attn. Dr. Gary Ramey

Memorial Composite
P.O. Box 300
Sydney Mines, Nova Scotia
B1V 2Y5
736-6233
Attn. Mr. Alex Gilchrist

Pictou Campus
P.O. Box 820
Stellarton, Nova Scotia
B0K 1S0
752-2002
Attn. Mr. Hugh MacDonald

Shelburne Campus
P.O. Box 760
Shelburne, Nova Scotia
B0T 1W0
875-3091
Attn. Mr. John MacLellan

Strait Campus
Reeves Street
P.O. Box 2000
Port Hawkesbury, Nova Scotia
B0E 2V0
625-2200
Attn. Mr. Ronald L. MacNeil

Sydney Campus
365 Prince Street
Sydney, Nova Scotia
B1P 5L2
564-4574
Attn. Mr. Gurdev Jolly

Dartmouth Adult Vocational Training Campus
10 Acadia Street
Dartmouth, Nova Scotia
B2Y 4H3
Attn. Mr. Dennis MacDonald

Cape Breton Adult
Vocational Training Campus
Glace Bay Highway
P.O. Box 1042
Sydney, Nova Scotia
B1P 6J7
563-2450
Attn. Mr. Gerald Beaton

University College of Cape Breton
Faculty of Trades and Technology
P.O. Box 5300
Sydney, Nova Scotia
B1P 6L2
539-5300

Maritime Forest Ranger School
R.R. #10
Fredericton, New Brunswick
E3B 6H6
506-458-0199
Attn. Mr. H.J.Torunski

Acadia University
Admissions Office
Wolfville, Nova Scotia
B0P 1X0
542-2201, ext.536

Atlantic School of Theology
640 Francklyn Street
Halifax, Nova Scotia
B3H 3B5
423-5592
Attn. Carolyn Blackmore

Dalhousie University
Registrar's Office
Halifax, Nova Scotia
B3H 3J5
424-2450

Mount Saint Vincent University
Registrar's Office
166 Bedford Highway
Halifax, Nova Scotia
B3M 2J6
443-4450, ext.128

Nova Scotia Agricultural College
Registrar's Office
P.O. Box 550
Truro, Nova Scotia
B2N 5E3
895-1571

Nova Scotia College of Art and Design
Admissions Office
5163 Duke Street
Halifax, Nova Scotia
B3J 3J6
422-7381, ext.129

Nova Scotia Teachers College
Registrar's Office
P.O. Box 810
Truro, Nova Scotia
B2N 5G5
895-5347, ext.263

St. Francis Xavier University
Registrar's Office
Antigonish, Nova Scotia
B2G 1C0
867-2160

Saint Mary's University
Registrar's Office
Halifax, Nova Scotia
B3H 3C3
420-5581

Technical University of Nova Scotia
Registrar's Office
P.O. Box 2345
Halifax, Nova Scotia
B3J 3C8
420-7598

University of Kings College
Registrar's Office
Halifax, Nova Scotia
B3H 2A1
422-1271

Universite Sainte-Anne
Church Point, Nova Scotia
B0W 1M0
769-2114

Holland College
Charlottetown, Prince Edward Island
C1A 4Z1

Nautical Institute
P.O. Box 1225
Reeves Street
Port Hawkesbury, Nova Scotia
B0E 2V0
625-2380
Attn. Mr. Thomas Kearsey

Other government departments and private trade schools should be consulted for programs and courses which are privately-run, offered at the Federal level, or departmentally-run within the Provincial Government of Nova Scotia.

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Canada. Employment and Immigration Canada. National Occupational Analysis and Classification Systems Branch. *Occupational analyses series.* Ottawa: Minister of Supply and Services, 1978 -

Canada. Employment and Immigration Canada. Occupational and Career Analysis and Development Branch. Career Guidance Material Division. *Careers Nova Scotia 1981.* Ottawa: CEIC, 1981.

Canada. Employment and Immigration Canada. Occupational and Career Analysis and Development Branch. *Careers in ...* (Careers Canada series of 34 booklets). Ottawa: Supply and Services, 1975 -

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  receptionist, 84
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  stock clerk, 84
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